NUS CORPORATION
A Halliburton Company

8908-15-38

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[redacted]

Quarterly Monitoring Reports for Permit - A-023 and Consent order (1/13/86).

FIELD INVESTIGATION TEAM ACTIVITIES AT UNCONTROLLED HAZARDOUS SUBSTANCES FACILITIES — ZONE I

NUS CORPORATION
SUPERFUND DIVISION

FMC Corporation

Agricultural Chemical Group
1701 East Patapsco Avenue Box 1616
Baltimore Maryland 21203
(301) 355 6400

ORIGINAL (Red)

FMC

January 13, 1989

Ms. Monica Satrape
Maryland Department of the Environment
Waste Management Administration
2500 Broening Highway
Baltimore, Maryland 21224

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Dear Ms. Satrape:

As per the requirement of Section I, Special Condition A of the Baltimore Plant's CHS Permit No. A-023 (EPA I.D. No. MDD003071875), attached is the fourth quarter, 1988 report listing the quantities of materials stored and incinerated on site.

Also, per the General Conditions of the CHS Permit and our Consent Order of January 13, 1986, attached are the sampling and analytical results of the groundwater monitoring program for the forth quarter.

Also, pursuant to Part III G of the Permit, attached are descriptions of deviations from the incinerator operating conditions specified in Part III C of the Permit for the fourth quarter.

If you have any questions about the report, please do not hesitate to contact me.

Sincerely yours,

John J. Giblin

John J. Giblin
Environmental Engineer

JJG:ct

cc: Sherry L. Gallagher - Federal Environmental Protection Agency
Joseph S. Stang - Maryland Department of the Environment
James F. Xavier - Maryland Department of the Environment

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FMC CORPORATION - BALTIMORE, MD
FOURTH QUARTER, 1988 REPORT

Permit No. A-023
EP ID No. MDD003071875
Special Condition A

Materials Incinerated On-Site	Quantity (Tons)
7-Hydroxy Tar (Plant 3)	372
Claisen Tar	134
Plant 4 Waste	1,142
Methallyl Chloride Waste	914
DV Ester Waste Methanol & Chloroacetylenics	224
Basin Oil	4

Materials Stored on Site	Quantity (Tons)
Waste Phosporus Pentasulfide	3.2
Contaminated Glassware	7.5
Hazardous Waste	260

Gascoyne Laboratories, Inc.

Baltimore, MD 21224-6697

BALTIMORE, M.D.
(301) 285-8510
FAX #
(301) 285-0815

ORIGINAL (Red)

REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

Report To: FMC Corporation Page: 1 of 26

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #12

	Results	Detection Limits	Method	Analyst	Date Test Completed
Arsenic (As)	ND	0.005	206.2	BH	10/28/88
Barium (Ba)	ND	0.5	208.1	KG	10/31/88
Cadmium (Cd)	ND	0.01	213.1	KG	10/31/88
Calcium (Ca)	120	1	215.1	KG	10/31/88
Chloride (Cl)	570	10	325.3	SW	11/09/88
Chromium (Cr), Hexavalent	ND	0.01	SM 312B	MM	11/07/88
Chromium (Cr), Total	ND	0.05	218.1	KG	10/31/88
Coliform Bacteria	23	2	SM 908A	CL	10/22/88
Copper (Cu)	0.02	0.01	220.1	KG	10/31/88
Fluoride (F)	0.11	0.05	340.2	SW	10/31/88
Gross Alpha, (pCi/liter)	ND	2	SC	SC	SC
Gross Beta, (pCi/liter)	ND	3	SC	SC	SC
Ground Water Elevation	7.16	NA	NA	MA	10/17/88
Iron (Fe)	22.9	0.1	236.1	KG	10/31/88
Lead (Pb)	ND	0.05	239.1	KG	10/31/88
Magnesium (Mg)	120	1	242.1	KG	10/31/88
Manganese (Mn)	8.81	0.01	243.1	KG	10/31/88
Mercury (Hg)	ND	0.005	245.1	FK/BH	11/15/88
Nickel (Ni)	0.16	0.02	249.1	KG	10/31/88
Nitrate (N)	ND	0.1	353.2	MM	11/11/88
Palladium (Pd)	ND	0.03	253.1	KG	10/31/88

Notes:
(1) Results are expressed in mg/liter (ppm).
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Please see reverse side for explanations and other information.

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ORIGINAL FOR

REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

Report To: FMC Corporation Page: 2 of 26

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #12

	Results	Detection Limits	Method	Analyst	Date Test Completed
pH (field)	5.6	NA	150.1	MA	10/19/88
pH (lab A)	5.8	NA	150.1	RAH	10/21/88
pH (lab B)	5.7	NA	150.1	RAH	10/21/88
pH (lab C)	5.8	NA	150.1	RAH	10/21/88
pH (lab D)	5.7	NA	150.1	RAH	10/21/88
Phenols (4-AAP)	0.044	0.005	140.1	TS/MM	11/04/88
Potassium (K)	6.7	0.1	258.1	KG	10/31/88
Radium (pCi/Liter)	ND	1	SC	SC	SC
Selenium (Se)	ND	0.005	270.2	BH	10/28/88
Silver (Ag)	ND	0.01	272.1	KG	10/31/88
Sodium (Na)	110	1	273.1	KG	10/31/88
Specific Conduct. (field)	2120	NA	120.1	MA	10/19/88
Specific Conduct. (lab A)	2350	NA	120.1	RAH	10/21/88
Specific Conduct. (lab B)	2380	NA	120.1	RAH	10/21/88
Specific Conduct. (lab C)	2370	NA	120.1	RAH	10/21/88
Specific Conduct. (lab D)	2373	NA	120.1	RAH	10/21/88
Sulfate (SO_4)	130	5	375.4	TG	11/09/88
Temperature, Degrees C	17.8	NA	170.1	MA	10/19/88
Total Dissolved Solids	1380	2	160.1	SW	10/31/88
Total Organic Carbon (A)	61	3	415.1	TS	11/02/88
Total Organic Carbon (B)	66	3	415.1	TS	11/02/88
Total Organic Carbon (C)	65	3	415.1	TS	11/02/88
Total Organic Carbon (D)	65	3	415.1	TS	11/02/88
Total Organic Halogen (A)	18	0.2	9020	AD	12/12/88
Total Organic Halogen (B)	20	0.2	9020	AD	12/12/88
Total Organic Halogen (C)	21	0.2	9020	AD	12/12/88
Total Organic Halogen (D)	21	0.2	9020	AD	12/12/88
Zinc (Zn)	0.14	0.01	289.1	KG	10/31/88

Notes:
(1) Results are expressed in mg/liter (ppm).
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Please see reverse side for explanations and other information.

Gascoyne Laboratories, Inc.

ORIGINAL (Red)

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

Report To: FMC Corporation Page: 3 of 26

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #12A

	Results	Detection Limits	Method	Analyst	Date Test Completed
Arsenic (As)	0.015	0.005	206.2	BH	10/28/88
Barium (Ba)	ND	0.5	208.1	KG	10/31/88
Cadmium (Cd)	ND	0.01	213.1	KG	10/31/88
Calcium (Ca)	45.9	0.1	215.1	KG	10/31/88
Chloride (Cl)	310	2	325.3	SW	11/09/88
Chromium (Cr), Hexavalent	ND	0.01	SM 312B	MM	11/07/88
Chromium (Cr), Total	ND	0.05	218.1	KG	10/31/88
Coliform Bacteria	27	2	SM 908A	CL	10/22/88
Copper (Cu)	0.02	0.01	220.1	KG	10/31/88
Fluoride (F)	0.06	0.05	340.2	SW	10/31/88
Gross Alpha, (pCi/liter)	11	2	SC	SC	SC
Gross Beta, (pCi/liter)	42	3	SC	SC	SC
Ground Water Elevation	3.71	NA	NA	MA	10/17/88
Iron (Fe)	214	1	236.1	KG	10/31/88
Lead (Pb)	ND	0.05	239.1	KG	10/31/88
Magnesium (Mg)	36.3	0.1	242.1	KG	10/31/88
Manganese (Mn)	2.37	0.01	243.1	KG	10/31/88
Mercury (Hg)	ND	0.005	245.1	FK/BH	11/15/88
Nickel (Ni)	ND	0.02	249.1	KG	10/31/88
Nitrate (N)	ND	0.1	353.2	MM	11/11/88
Palladium (Pd)	ND	0.03	253.1	KG	10/31/88

Notes:
(1) Results are expressed in mg/liter (ppm).
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

Report To: FMC Corporation Page: 4 of 26

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #12A

	Results	Detection Limits	Method	Analyst	Date Test Completed
pH (field)	6.0	NA	150.1	MA	10/19/88
pH (lab A)	6.1	NA	150.1	RAH	10/21/88
pH (lab B)	6.1	NA	150.1	RAH	10/21/88
pH (lab C)	6.1	NA	150.1	RAH	10/21/88
pH (lab D)	6.1	NA	150.1	RAH	10/21/88
Phenols (4-AAP)	1.37	0.05	140.1	TS/MM	11/04/88
Potassium (K)	54	1	258.1	KG	10/31/88
Radium (pCi/Liter)	ND	1	SC	SC	SC
Selenium (Se)	ND	0.005	270.2	BH	10/28/88
Silver (Ag)	ND	0.01	272.1	KG	10/31/88
Sodium (Na)	93	1	273.1	KG	10/31/88
Specific Conduct. (field)	1380	NA	120.1	MA	10/19/88
Specific Conduct. (lab A)	1780	NA	120.1	RAH	10/21/88
Specific Conduct. (lab B)	1790	NA	120.1	RAH	10/21/88
Specific Conduct. (lab C)	1790	NA	120.1	RAH	10/21/88
Specific Conduct. (lab D)	1780	NA	120.1	RAH	10/21/88
Sulfate (SO_4)	280	5	375.4	TG	11/09/88
Temperature, Degrees C	15.1	NA	170.1	MA	10/19/88
Total Dissolved Solids	1320	2	160.1	SW	10/31/88
Total Organic Carbon (A)	61	3	415.1	TS	11/02/88
Total Organic Carbon (B)	66	3	415.1	TS	11/02/88
Total Organic Carbon (C)	67	3	415.1	TS	11/02/88
Total Organic Carbon (D)	61	3	415.1	TS	11/02/88
Total Organic Halogen (A)	3.6	0.04	9020	AD	12/21/88
Total Organic Halogen (B)	4.2	0.04	9020	AD	12/21/88
Total Organic Halogen (C)	4.4	0.04	9020	AD	12/21/88
Total Organic Halogen (D)	5.2	0.04	9020	AD	12/21/88
Zinc (Zn)	0.07	0.01	289.1	KG	10/31/88

Notes: (1) Results are expressed in mg/liter (ppm).
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

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ORIGINAL
(Red)

REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

Report To: FMC Corporation Page: 5 of 26

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #13

	Results	Detection Limits	Method	Analyst	Date Test Completed
Arsenic (As)	0.14	0.005	206.2	BH	10/28/88
Barium (Ba)	0.8	0.5	208.1	KG	10/31/88
Cadmium (Cd)	ND	0.01	213.1	KG	10/31/88
Calcium (Ca)	550	10	215.1	KG	10/31/88
Chloride (Cl)	2800	25	325.3	SW	11/09/88
Chromium (Cr), Hexavalent	ND	0.01	SM 312B	MM	11/07/88
Chromium (Cr), Total	0.14	0.05	218.1	KG	10/31/88
Coliform Bacteria	220	2	SM 908A	CL	10/22/88
Copper (Cu)	0.01	0.01	220.1	KG	10/31/88
Fluoride (F)	0.62	0.05	340.2	SW	10/31/88
Gross Alpha, (pCi/liter)	82	2	SC	SC	SC
Gross Beta, (pCi/liter)	904	3	SC	SC	SC
Ground Water Elevation	5.3	NA	NA	MA	10/17/88
Iron (Fe)	198	1	236.1	KG	10/31/88
Lead (Pb)	0.06	0.05	239.1	KG	10/31/88
Magnesium (Mg)	300	1	242.1	KG	10/31/88
Manganese (Mn)	1.31	0.01	243.1	KG	10/31/88
Mercury (Hg)	ND	0.005	245.1	FK/BH	11/15/88
Nickel (Ni)	0.15	0.02	249.1	KG	10/31/88
Nitrate (N)	ND	10	353.2	MM	11/11/88
Palladium (Pd)	ND	0.03	253.1	KG	10/31/88

Notes:
(1) Results are expressed in mg/liter (ppm).
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

Report To: FMC Corporation

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #13

	Results	Detection Limits	Method	Analyst	Date Test Completed
pH (field)	6.7	NA	150.1	MA	10/19/88
pH (lab A)	6.7	NA	150.1	RAH	10/21/88
pH (lab B)	6.8	NA	150.1	RAH	10/21/88
pH (lab C)	6.8	NA	150.1	RAH	10/21/88
pH (lab D)	6.8	NA	150.1	RAH	10/21/88
Phenols (4-AAP)	1.8	0.10	140.1	TS/MM	11/04/88
Potassium (K)	800	10	258.1	KG	10/31/88
Radium (pCi/Liter)	13	1	SC	SC	SC
Selenium (Se)	ND	0.005	270.2	BH	10/28/88
Silver (Ag)	ND	0.01	272.1	KG	10/31/88
Sodium (Na)	470	1	273.1	KG	10/31/88
Specific Conduct. (field)	9070	NA	120.1	MA	10/19/88
Specific Conduct. (lab A)	11230	NA	120.1	RAH	10/21/88
Specific Conduct. (lab B)	11250	NA	120.1	RAH	10/21/88
Specific Conduct. (lab C)	11240	NA	120.1	RAH	10/21/88
Specific Conduct. (lab D)	11340	NA	120.1	RAH	10/21/88
Sulfate (SO_4)	ND	10	375.4	TG	11/09/88
Temperature, Degrees C	17.6	NA	170.1	MA	10/19/88
Total Dissolved Solids	9800	4	160.1	RAH/SW	10/28/88
Total Organic Carbon (A)	1700	50	415.1	TS	11/02/88
Total Organic Carbon (B)	1800	50	415.1	TS	11/02/88
Total Organic Carbon (C)	1700	50	415.1	TS	11/02/88
Total Organic Carbon (D)	1800	50	415.1	TS	11/02/88
Total Organic Halogen (A)	75	1	9020	AD	12/21/88
Total Organic Halogen (B)	79	1	9020	AD	12/21/88
Total Organic Halogen (C)	86	1	9020	AD	12/21/88
Total Organic Halogen (D)	92	1	9020	AD	12/21/88
Zinc (Zn)	0.05	0.01	289.1	KG	10/31/88

Notes:
(1) Results are expressed in mg/liter (ppm).
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Gascoyne Laboratories, Inc.

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

Report To: FMC Corporation Page: 7 of 26

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #13A

	Results	Detection Limits	Method	Analyst	Date Test Completed
Arsenic (As)	0.011	0.005	206.2	BH	10/28/88
Barium (Ba)	ND	0.5	208.1	KG	10/31/88
Cadmium (Cd)	ND	0.01	213.1	KG	10/31/88
Calcium (Ca)	86	1	215.1	KG	10/31/88
Chloride (Cl)	2300	25	325.3	SW	11/09/88
Chromium (Cr), Hexavalent	ND	0.01	SM 312B	MM	11/07/88
Chromium (Cr), Total	ND	0.05	218.1	KG	10/31/88
Coliform Bacteria	ND	2	SM 908A	CL	10/22/88
Copper (Cu)	0.01	0.01	220.1	KG	10/31/88
Fluoride (F)	0.05	0.05	340.2	SW	10/31/88
Gross Alpha, (pCi/liter)	ND	2	SC	SC	SC
Gross Beta, (pCi/liter)	ND	3	SC	SC	SC
Ground Water Elevation	3.35	NA	NA	MA	10/17/88
Iron (Fe)	1200	10	236.1	KG	10/31/88
Lead (Pb)	ND	0.05	239.1	KG	10/31/88
Magnesium (Mg)	130	1	242.1	KG	10/31/88
Manganese (Mn)	3.46	0.01	243.1	KG	10/31/88
Mercury (Hg)	ND	0.005	245.1	FK/BH	11/15/88
Nickel (Ni)	0.20	0.02	249.1	KG	10/31/88
Nitrate (N)	ND	1	353.2	MM	11/11/88
Palladium (Pd)	ND	0.03	253.1	KG	10/31/88

Notes:
(1) Results are expressed in mg/liter (ppm).
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

Report To: FMC Corporation

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #13A

	Results	Detection Limits	Method	Analyst	Date Test Completed
pH (field)	5.8	NA	150.1	MA	10/19/88
pH (lab A)	5.7	NA	150.1	RAH	10/21/88
pH (lab B)	5.6	NA	150.1	RAH	10/21/88
pH (lab C)	5.8	NA	150.1	RAH	10/21/88
pH (lab D)	5.7	NA	150.1	RAH	10/21/88
Phenols (4-AAP)	0.039	0.005	140.1	TS/MM	11/04/88
Potassium (K)	50.7	0.1	258.1	KG	10/31/88
Radium (pCi/Liter)	ND	1	SC	SC	SC
Selenium (Se)	ND	0.005	270.2	BH	10/28/88
Silver (Ag)	ND	0.01	272.1	KG	10/31/88
Sodium (Na)	340	1	273.1	KG	10/31/88
Specific Conduct. (field)	5360	NA	120.1	MA	10/19/88
Specific Conduct. (lab A)	6430	NA	120.1	RAH	10/21/88
Specific Conduct. (lab B)	6360	NA	120.1	RAH	10/21/88
Specific Conduct. (lab C)	6500	NA	120.1	RAH	10/21/88
Specific Conduct. (lab D)	6510	NA	120.1	RAH	10/21/88
Sulfate (SO_4)	390	10	375.4	TG	11/09/88
Temperature, Degrees C	16	NA	170.1	MA	10/19/88
Total Dissolved Solids	5000	4	160.1	SW	10/28/88
Total Organic Carbon (A)	340	50	415.1	TS	11/03/88
Total Organic Carbon (B)	290	50	415.1	TS	11/03/88
Total Organic Carbon (C)	390	50	415.1	TS	11/03/88
Total Organic Carbon (D)	360	50	415.1	TS	11/03/88
Total Organic Halogen (A)	5.7	0.1	9020	AD	10/21/88
Total Organic Halogen (B)	6.0	0.1	9020	AD	10/21/88
Total Organic Halogen (C)	8.5	0.1	9020	AD	10/21/88
Total Organic Halogen (D)	9.7	0.1	9020	AD	10/21/88
Zinc (Zn)	0.14	0.01	289.1	KG	10/31/88

Notes:
(1) Results are expressed in mg/liter (ppm).
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

Irving M. Kipnis

Laboratory Director
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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

Report To: FMC Corporation

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #14

	Results	Detection Limits	Method	Analyst	Date Test Completed
Arsenic (As)	0.011	0.005	206.2	BH	10/28/88
Barium (Ba)	ND	0.5	208.1	KG	10/31/88
Cadmium (Cd)	ND	0.01	213.1	KG	10/31/88
Calcium (Ca)	87	1	215.1	KG	10/31/88
Chloride (Cl)	470	2	325.3	SW	11/09/88
Chromium (Cr), Hexavalent	ND	0.01	SM 312B	MM	11/07/88
Chromium (Cr), Total	ND	0.05	218.1	KG	10/31/88
Coliform Bacteria	8	2	SM 908A	CL	10/22/88
Copper (Cu)	0.01	0.01	220.1	KG	10/31/88
Fluoride (F)	0.40	0.05	340.2	SW	10/31/88
Gross Alpha, (pCi/liter)	ND	2	SC	SC	SC
Gross Beta, (pCi/liter)	ND	3	SC	SC	SC
Ground Water Elevation	1.78	NA	NA	MA	10/19/88
Iron (Fe)	77.1	0.1	236.1	KG	10/31/88
Lead (Pb)	ND	0.05	239.1	KG	10/31/88
Magnesium (Mg)	62	1	242.1	KG	10/31/88
Manganese (Mn)	1.36	0.01	243.1	KG	10/31/88
Mercury (Hg)	ND	0.005	245.1	FK/BH	11/15/88
Nickel (Ni)	ND	0.02	249.1	KG	10/31/88
Nitrate (N)	ND	1	353.2	MM	11/11/88
Palladium (Pd)	ND	0.03	253.1	KG	10/31/88

Notes:
(1) Results are expressed in mg/liter (ppm).
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

Irving M. Kipnis

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #14

	Results	Detection Limits	Method	Analyst	Date Test Completed
pH (field)	6.5	NA	150.1	MA	10/19/88
pH (lab A)	6.6	NA	150.1	RAH	10/21/88
pH (lab B)	6.7	NA	150.1	RAH	10/21/88
pH (lab C)	6.6	NA	150.1	RAH	10/21/88
pH (lab D)	6.6	NA	150.1	RAH	10/21/88
Phenols (4-AAP)	0.031	0.005	140.1	TS/MM	11/04/88
Potassium (K)	62	1	258.1	KG	10/31/88
Radium (pCi/Liter)	ND	1	SC	SC	SC
Selenium (Se)	ND	0.005	270.2	BH	10/28/88
Silver (Ag)	ND	0.01	272.1	KG	10/31/88
Sodium (Na)	140	1	273.1	KG	10/31/88
Specific Conduct. (field)	1917	NA	120.1	MA	10/19/88
Specific Conduct. (lab A)	2080	NA	120.1	RAH	10/21/88
Specific Conduct. (lab B)	2200	NA	120.1	RAH	10/21/88
Specific Conduct. (lab C)	2230	NA	120.1	RAH	10/21/88
Specific Conduct. (lab D)	2220	NA	120.1	RAH	10/21/88
Sulfate (SO_4)	ND	2	375.4	TG	11/09/88
Temperature, Degrees C	17.5	NA	170.1	MA	10/19/88
Total Dissolved Solids	1600	2	160.1	SW	10/28/88
Total Organic Carbon (A)	96	5	415.1	TS	11/07/88
Total Organic Carbon (B)	92	5	415.1	TS	11/07/88
Total Organic Carbon (C)	81	5	415.1	TS	11/07/88
Total Organic Carbon (D)	95	5	415.1	TS	11/07/88
Total Organic Halogen (A)	2.5	0.2	9020	AD/GD	12/28/88
Total Organic Halogen (B)	2.7	0.2	9020	AD/GD	12/28/88
Total Organic Halogen (C)	3.6	0.2	9020	AD/GD	12/28/88
Total Organic Halogen (D)	4.1	0.2	9020	AD/GD	12/28/88
Zinc (Zn)	0.05	0.01	289.1	KG	10/31/88

Notes:
(1) Results are expressed in mg/liter (ppm).
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #15

	Results	Detection Limits	Method	Analyst	Date Test Completed
Arsenic (As)	0.086	0.005	206.2	BH	10/28/88
Barium (Ba)	ND	0.5	208.1	KG	10/31/88
Cadmium (Cd)	ND	0.01	213.1	KG	10/31/88
Calcium (Ca)	78	1	215.1	KG	10/31/88
Chloride (Cl)	6900	50	325.3	SW	11/09/88
Chromium (Cr), Hexavalent	ND	0.01	SM 312B	MM	11/07/88
Chromium (Cr), Total	ND	0.05	218.1	KG	10/31/88
Coliform Bacteria	ND	2	SM 908A	CL	10/22/88
Copper (Cu)	0.01	0.01	220.1	KG	10/31/88
Fluoride (F)	0.17	0.05	340.2	SW	10/31/88
Gross Alpha, (pCi/liter)	ND	2	SC	SC	SC
Gross Beta, (pCi/liter)	1620	3	SC	SC	SC
Ground Water Elevation	9.53	NA	NA	MA	10/19/88
Iron (Fe)	0.26	0.01	236.1	KG	10/31/88
Lead (Pb)	0.11	0.05	239.1	KG	10/31/88
Magnesium (Mg)	820	10	242.1	KG	10/31/88
Manganese (Mn)	0.21	0.01	243.1	KG	10/31/88
Mercury (Hg)	ND	0.005	245.1	FK/BH	11/15/88
Nickel (Ni)	0.07	0.02	249.1	KG	10/31/88
Nitrate (N)	ND	10	353.2	MM	11/11/88
Palladium (Pd)	ND	0.03	253.1	KG	10/31/88

Notes:
(1) Results are expressed in mg/liter (ppm).
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #15

	Results	Detection Limits	Method	Analyst	Date Test Completed
pH (field)	6.6	NA	150.1	MA	10/19/88
pH (lab A)	6.8	NA	150.1	RAH	10/21/88
pH (lab B)	6.8	NA	150.1	RAH	10/21/88
pH (lab C)	6.8	NA	150.1	RAH	10/21/88
pH (lab D)	6.8	NA	150.1	RAH	10/21/88
Phenols (4-AAP)	33	0.3	140.1	TS/MM	11/04/88
Potassium (K)	1600	10	258.1	KG	10/31/88
Radium (pCi/Liter)	ND	1	SC	SC	SC
Selenium (Se)	ND	0.05	270.2	BH	10/28/88
Silver (Ag)	ND	0.01	272.1	KG	10/31/88
Sodium (Na)	420	1	273.1	KG	10/31/88
Specific Conduct. (field)	15720	NA	120.1	MA	10/19/88
Specific Conduct. (lab A)	24000	NA	120.1	RAH	10/21/88
Specific Conduct. (lab B)	24100	NA	120.1	RAH	10/21/88
Specific Conduct. (lab C)	24000	NA	120.1	RAH	10/21/88
Specific Conduct. (lab D)	23900	NA	120.1	RAH	10/21/88
Sulfate (SO_4)	ND	10	375.4	TG	11/09/88
Temperature, Degrees C	15.7	NA	170.1	MA	10/19/88
Total Dissolved Solids	16300	4	160.1	SW	10/28/88
Total Organic Carbon (A)	2100	100	415.1	TS	11/07/88
Total Organic Carbon (B)	2000	100	415.1	TS	11/07/88
Total Organic Carbon (C)	1900	100	415.1	TS	11/07/88
Total Organic Carbon (D)	1900	100	415.1	TS	11/07/88
Total Organic Halogen (A)	29	2	9020	GD	12/30/88
Total Organic Halogen (B)	31	2	9020	GD	12/30/88
Total Organic Halogen (C)	33	2	9020	GD	12/30/88
Total Organic Halogen (D)	37	2	9020	GD	12/30/88
Zinc (Zn)	0.09	0.01	289.1	KG	10/31/88

Notes:
(1) Results are expressed in mg/liter (ppm).
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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Subject: Fourth Quarter Groundwater Results

Compound	Well 12	Well 12A	Well 13	Well 13A	Well 14	Well 15
Aniline	ND	ND	4122	ND	ND	ND
Ethyl carbamate	ND	ND	ND	ND	ND	ND
Methyl carbamate	ND	ND	ND	ND	ND	ND
DAP	ND	ND	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND	ND
Ethion	ND	ND	ND	ND	ND	ND
Lindane	ND	ND	ND	ND	ND	ND
Methoxychlor	ND	ND	ND	ND	ND	ND
ONP	ND	ND	ND	ND	ND	ND
Pyrethrum	ND	ND	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND	ND	ND
Xylenes	116	47	642	20	928	ND
Toluidine	ND	ND	3758	ND	ND	ND
2,4-D	ND	ND	ND	ND	ND	ND
Silvex	ND	ND	ND	ND	ND	ND

All results are in ug/L (ppb)

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #16

	Results	Detection Limits	Method	Analyst	Date Test Completed
Arsenic (As)	0.11	0.005	206.2	BH	10/28/88
Barium (Ba)	ND	0.5	208.1	KG	10/31/88
Cadmium (Cd)	ND	0.01	213.1	KG	10/31/88
Calcium (Ca)	94	1	215.1	KG	10/31/88
Chloride (Ci)	2100	25	325.3	SW	11/09/88
Chromium (Cr), Total	0.20	0.05	218.1	KG	10/31/88
Coliform Bacteria	>1600	2	SM 908A	CL	10/22/88
Endrin	ND	0.01	608	GD	11/02/88
Fluoride (F)	0.24	0.05	340.2	SW	10/31/88
Gross Alpha, pCi/liter	ND	2	SC	SC	SC
Gross Beta, pCi/liter	ND	3	SC	SC	SC
Ground Water Elevation	2.68	NA	NA	MA	10/17/88
Iron (Fe)	0.49	0.01	236.1	KG	10/31/88
Lead (Pb)	0.06	0.05	239.1	KG	10/31/88
Lindane	ND	0.05	608	GD	12/12/88
Magnesium (Mg)	390	1	242.1	KG	10/31/88
Manganese (Mn)	1.20	0.01	243.1	KG	10/31/88
Mercury (Hg)	ND	0.005	245.1	FK/BH	11/15/88
Methoxychlor	ND	0.1	608	GD	11/02/88
Nitrate (N)	ND	10	353.2	MM	11/11/88
pH (field)	7.0	NA	150.1	MA	10/19/88
pH (lab A)	7.1	NA	150.1	RAH	10/21/88
pH (lab B)	7.2	NA	150.1	RAH	10/21/88
ph (lab C)	7.1	NA	150.1	RAH	10/21/88
pH (lab D)	7.3	NA	150.1	RAH	10/21/88

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #16

	Results	Detection Limits	Method	Analyst	Date Test Completed
Phenols (4-AAP)	0.65	0.05	140.1	TS/MM	11/04/88
Potassium (K)	1000	10	258.1	KG	10/31/88
Radium, pCi/liter	3	1	SC	SC	SC
Selenium (Se)	ND	0.005	270.2	BH	10/28/88
Silver (Ag)	ND	0.01	272.1	KG	10/31/88
Sodium (Na)	360	1	273.1	KG	10/31/88
Specific Conduct. (field)	12550	NA	120.1	MA	10/19/88
Specific Conduct. (lab A)	15920	NA	120.1	RAH	10/21/88
Specific Conduct. (lab B)	15520	NA	120.1	RAH	10/21/88
Specific Conduct. (lab C)	16970	NA	120.1	RAH	10/21/88
Specific Conduct. (lab D)	17560	NA	120.1	RAH	10/21/88
Sulfate (SO_4)	ND	10	375.4	TG	11/09/88
Temperature, Degrees C	20.1	NA	170.1	MA	10/19/88
Total Dissolved Solids	7180	4	160.1	SW	10/28/88
Total Organic Carbon (A)	200	5	415.1	MM	11/07/88
Total Organic Carbon (B)	240	10	415.1	MM	11/07/88
Total Organic Carbon (C)	240	10	415.1	MM	11/07/88
Total Organic Carbon (D)	250	10	415.1	MM	11/07/88
Total Organic Halogen (A)	150	2	9020	AD	12/21/88
Total Organic Halogen (B)	200	2	9020	AD	12/21/88
Total Organic Halogen (C)	200	2	9020	AD	12/21/88
Total Organic Halogen (D)	240	2	9020	AD	12/21/88
Toxaphene	ND	0.2	608	GD	11/02/88
2,4-D	ND	0.01	8150	GD	11/30/88
2,4,5-TP (Silvex)	ND	0.01	8150	GD	11/30/88

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #17

	Results	Detection Limits	Method	Analyst	Date Test Completed
Arsenic (As)	ND	0.005	206.2	BH	10/28/88
Barium (Ba)	ND	0.5	208.1	KG	10/31/88
Cadmium (Cd)	ND	0.01	213.1	KG	10/31/88
Calcium (Ca)	27.8	0.1	215.1	KG	10/31/88
Chloride (Cl)	680	5	325.3	SW	11/09/88
Chromium (Cr), Total	ND	0.05	218.1	KG	10/31/88
Coliform Bacteria	ND	2	SM 908A	CL	10/22/88
Endrin	ND	0.001	608	GD	11/11/88
Fluoride (F)	0.34	0.05	340.2	SW	10/31/88
Gross Alpha, pCi/liter	ND	2	SC	SC	SC
Gross Beta, pCi/liter	11	3	SC	SC	SC
Ground Water Elevation	2.27	NA	NA	MA	10/17/88
Iron (Fe)	201	1	236.1	KG	10/31/88
Lead (Pb)	0.05	0.05	239.1	KG	10/31/88
Lindane	ND	0.01	608	GD	11/11/88
Magnesium (Mg)	96	1	242.1	KG	10/31/88
Manganese (Mn)	3.90	0.01	243.1	KG	10/31/88
Mercury (Hg)	ND	0.005	245.1	FK/BH	11/15/88
Methoxychlor	ND	0.01	608	GD	11/11/88
Nitrate (N)	ND	0.1	353.2	MM	11/11/88
pH (field)	4.4	NA	150.1	MA	10/19/88
pH (lab A)	4.6	NA	150.1	RAH	10/21/88
pH (lab B)	4.6	NA	150.1	RAH	10/21/88
pH (lab C)	4.6	NA	150.1	RAH	10/21/88
pH (lab D)	4.6	NA	150.1	RAH	10/21/88

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/19/88 at the Patapsco Avenue, Location: Well #17

	Results	Detection Limits	Method	Analyst	Date Test Completed
Phenols (4-AAP)	0.406	0.005	140.1	TS/MM	11/04/88
Potassium (K)	10.4	0.1	258.1	KG	10/31/88
Radium, pCi/liter	3	1	SC	SC	SC
Selenium (Se)	ND	0.005	270.2	BH	10/28/88
Silver (Ag)	ND	0.01	272.1	KG	10/31/88
Sodium (Na)	300	1	273.1	KG	10/31/88
Specific Conduct. (field)	2510	NA	120.1	MA	10/19/88
Specific Conduct. (lab A)	3040	NA	120.1	RAH	10/21/88
Specific Conduct. (lab B)	3130	NA	120.1	RAH	10/21/88
Specific Conduct. (lab C)	3170	NA	120.1	RAH	10/21/88
Specific Conduct. (lab D)	3140	NA	120.1	RAH	10/21/88
Sulfate (SO_4)	610	10	375.4	TG	11/09/88
Temperature, Degrees C	17.2	NA	170.1	MA	10/19/88
Total Dissolved Solids	2660	4	160.1	SW	10/28/88
Total Organic Carbon (A)	97	5	415.1	MM	11/07/88
Total Organic Carbon (B)	93	5	415.1	MM	11/07/88
Total Organic Carbon (C)	95	5	415.1	MM	11/07/88
Total Organic Carbon (D)	93	5	415.1	MM	11/07/88
Total Organic Halogen (A)	36	1	9020	GD	12/30/88
Total Organic Halogen (B)	42	1	9020	GD	12/30/88
Total Organic Halogen (C)	43	1	9020	GD	12/30/88
Total Organic Halogen (D)	47	1	9020	GD	12/30/88
Toxaphene	ND	0.02	608	GD	11/11/88
2,4-D	ND	0.02	8150	GD	11/30/88
2,4,5-TP (Silvex)	ND	0.01	8150	GD	11/30/88

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/20/88 at the Patapsco Avenue, Location: Well #22

	Results	Detection Limits	Method	Analyst	Date Test Completed
Arsenic (As)	ND	0.005	206.2	BH	10/28/88
Barium (Ba)	ND	0.5	208.1	KG	10/31/88
Cadmium (Cd)	ND	0.01	213.1	KG	10/31/88
Calcium (Ca)	29.0	0.1	215.1	KG	10/31/88
Chloride (Cl)	290	2	325.3	SW	11/09/88
Chromium (Cr), Total	ND	0.05	218.1	KG	10/31/88
Coliform Bacteria	170	2	SM 908A	CL	10/22/88
Endrin	ND	0.001	608	GD	11/02/88
Fluoride (F)	0.08	0.05	340.2	SW	10/31/88
Gross Alpha, pCi/liter	22	2	SC	SC	SC
Gross Beta, pCi/liter	27	3	SC	SC	SC
Ground Water Elevation	12.31	NA	NA	MA	10/17/88
Iron (Fe)	22.3	0.1	236.1	KG	10/31/88
Lead (Pb)	ND	0.05	239.1	KG	10/31/88
Lindane	ND	0.001	608	GD	11/02/88
Magnesium (Mg)	38.8	0.1	242.1	KG	10/31/88
Manganese (Mn)	0.78	0.01	243.1	KG	10/31/88
Mercury (Hg)	ND	0.005	245.1	FK/BH	11/15/88
Methoxychlor	ND	0.01	608	GD	11/02 88
Nitrate (N)	ND	0.1	353.2	MM	11/11/88
pH (field)	5.7	NA	150.1	MA	10/20/88
pH (lab A)	6.0	NA	150.1	RAH	10/21/88
pH (lab B)	5.9	NA	150.1	RAH	10/21/88
pH (lab C)	5.9	NA	150.1	RAH	10/21/88
pH (lab D)	6.0	NA	150.1	RAH	10/21/88

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/20/88 at the Patapsco Avenue, Location: Well #22

	Results	Detection Limits	Method	Analyst	Date Test Completed
Phenols (4-AAP)	0.338	0.005	140.1	TS/MM	11/04/88
Potassium (K)	1.7	0.1	258.1	KG	10/31/88
Radium, pCi/liter	ND	1	SC	SC	SC
Selenium (Se)	ND	0.005	270.2	BH	10/28/88
Silver (Ag)	ND	0.01	272.1	KG	10/31/88
Sodium (Na)	79	1	273.1	KG	10/31/88
Specific Conduct. (field)	774	NA	120.1	MA	10/20/88
Specific Conduct. (lab A)	898	NA	120.1	RAH	10/20/88
Specific Conduct. (lab B)	951	NA	120.1	RAH	10/20/88
Specific Conduct. (lab C)	915	NA	120.1	RAH	10/20/88
Specific Conduct. (lab D)	958	NA	120.1	RAH	10/20/88
Sulfate (SO_4)	26	10	375.4	TG	11/09/88
Temperature, Degrees C	18.5	NA	170.1	MA	10/20/88
Total Dissolved Solids	602	1	160.1	SW	10/28/88
Total Organic Carbon (A)	170	10	415.1	TS	11/08/88
Total Organic Carbon (B)	170	10	415.1	TS	11/08/88
Total Organic Carbon (C)	180	10	415.1	TS	11/08/88
Total Organic Carbon (D)	170	10	415.1	TS	11/08/88
Total Organic Halogen (A)	33	0.2	9020	GD	12/22/88
Total Organic Halogen (B)	38	0.2	9020	GD	12/22/88
Total Organic Halogen (C)	42	0.2	9020	GD	12/22/88
Total Organic Halogen (D)	44	0.2	9020	GD	12/22/88
Toxaphene	ND	0.03	608	GD	11/02/88
2,4-D	ND	0.01	8150	GD	11/30/88
2,4,5-TP (Silvex)	ND	0.001	8150	GD	11/30/88

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Please see reverse side for explanations and other information.

Gascoyne Laboratories, Inc.

ORIGINAL (Red)

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/20/88 at the Patapsco Avenue, Location: Well #23

	Results	Detection Limits	Method	Analyst	Date Test Completed
Arsenic (As)	ND	0.005	206.2	BH	10/28/88
Barium (Ba)	ND	0.5	208.1	KG	10/31/88
Cadmium (Cd)	ND	0.01	213.1	KG	10/31/88
Calcium (Ca)	22.2	0.1	215.1	KG	10/31/88
Chloride (Cl)	220	5	325.3	SW	11/09/88
Chromium (Cr), Total	ND	0.05	218.1	KG	10/31/88
Coliform Bacteria	500	2	SM 908A	CL	10/22/88
Endrin	ND	0.001	608	GD	11/02/88
Fluoride (F)	0.07	0.05	340.2	SW	10/31/88
Gross Alpha, pCi/liter	8	2	SC	SC	SC
Gross Beta, pCi/liter	8	3	SC	SC	SC
Ground Water Elevation	13.41	NA	NA	MA	10/20/88
Iron (Fe)	58.7	0.1	236.1	KG	10/31/88
Lead (Pb)	ND	0.05	239.1	KG	10/31/88
Lindane	ND	0.001	608	GD	11/02/88
Magnesium (Mg)	21.7	0.1	242.1	KG	10/31/88
Manganese (Mn)	0.57	0.01	243.1	KG	10/31/88
Mercury (Hg)	ND	0.005	245.1	FK/BH	11/15/88
Methoxychlor	ND	0.01	608	GD	11/02 88
Nitrate (N)	ND	1	353.2	MM	11/11/88
pH (field)	6.0	NA	150.1	MA	10/20/88
pH (lab A)	6.1	NA	150.1	RAH	10/21/88
pH (lab B)	6.2	NA	150.1	RAH	10/21/88
pH (lab C)	6.2	NA	150.1	RAH	10/21/88
pH (lab D)	6.3	NA	150.1	RAH	10/21/88

Notes:
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(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

Report To: FMC Corporation Page: 20 of 26

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/20/88 at the Patapsco Avenue, Location: Well #23

	Results	Detection Limits	Method	Analyst	Date Test Completed
Phenols (4-AAP)	0.234	0.005	140.1	TS/MM	11/04/88
Potassium (K)	1.2	0.1	258.1	KG	10/31/88
Radium, pCi/liter	ND	1	SC	SC	SC
Selenium (Se)	ND	0.005	270.2	BH	10/28/88
Silver (Ag)	ND	0.01	272.1	KG	10/31/88
Sodium (Na)	40.9	0.1	273.1	KG	10/31/88
Specific Conduct. (field)	604	NA	120.1	MA	10/20/88
Specific Conduct. (lab A)	685	NA	120.1	RAH	10/20/88
Specific Conduct. (lab B)	674	NA	120.1	RAH	10/20/88
Specific Conduct. (lab C)	686	NA	120.1	RAH	10/20/88
Specific Conduct. (lab D)	693	NA	120.1	RAH	10/20/88
Sulfate (SO_4)	ND	10	375.4	TG	11/09/88
Temperature, Degrees C	18.2	NA	170.1	MA	10/20/88
Total Dissolved Solids	447	1	160.1	SW	10/28/88
Total Organic Carbon (A)	120	5	415.1	TS	11/08/88
Total Organic Carbon (B)	110	5	415.1	TS	11/08/88
Total Organic Carbon (C)	130	5	415.1	TS	11/08/88
Total Organic Carbon (D)	120	5	415.1	TS	11/08/88
Total Organic Halogen (A)	30	0.5	9020	GD	12/30/88
Total Organic Halogen (B)	32	0.5	9020	GD	12/30/88
Total Organic Halogen (C)	32	0.5	9020	GD	12/30/88
Total Organic Halogen (D)	35	0.5	9020	GD	12/30/88
Toxaphene	ND	0.03	608	GD	11/02/88
2,4-D	ND	0.01	8150	GD	11/07/88
2,4,5-TP (Silvex)	ND	0.003	8150	GD	11/07/88

Notes:
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(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/20/88 at the Patapsco Avenue, Location: Well #24

	Results	Detection Limits	Method	Analyst	Date Test Completed
Arsenic (As)	ND	0.005	206.2	BH	10/28/88
Barium (Ba)	ND	0.5	208.1	KG	10/31/88
Cadmium (Cd)	ND	0.01	213.1	KG	10/31/88
Calcium (Ca)	10.5	0.1	215.1	KG	10/31/88
Chloride (Cl)	110	2	325.3	SW	11/09/88
Chromium (Cr), Total	ND	0.05	218.1	KG	10/31/88
Coliform Bacteria	30	2	SM 908A	CL	10/22/88
Endrin	ND	0.001	608	GD	11/02/88
Fluoride (F)	0.06	0.05	340.2	SW	10/31/88
Gross Alpha, pCi/liter	ND	2	SC	SC	SC
Gross Beta, pCi/liter	ND	3	SC	SC	SC
Ground Water Elevation	13.38	NA	NA	MA	10/20/88
Iron (Fe)	48.2	0.1	236.1	KG	10/31/88
Lead (Pb)	ND	0.05	239.1	KG	10/31/88
Lindane	ND	0.002	608	GD	11/02/88
Magnesium (Mg)	7.1	0.1	242.1	KG	10/31/88
Manganese (Mn)	0.32	0.01	243.1	KG	10/31/88
Mercury (Hg)	ND	0.005	245.1	FK/BH	11/15/88
Methoxychlor	ND	0.01	608	GD	11/02 88
Nitrate (N)	ND	0.01	353.2	MM	11/11/88
pH (field)	6.1	NA	150.1	MA	10/20/88
pH (lab A)	6.2	NA	150.1	RAH	10/21/88
pH (lab B)	6.1	NA	150.1	RAH	10/21/88
pH (lab C)	6.1	NA	150.1	RAH	10/21/88
pH (lab D)	6.2	NA	150.1	RAH	10/21/88

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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REPORT OF ANALYSIS

Report No. 88-10-291

Report Date: January 9, 1989

Report To: FMC Corporation

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/20/88 at the Patapsco Avenue, Location: Well #24

	Results	Detection Limits	Method	Analyst	Date Test Completed
Phenols (4-AAP)	0.027	0.005	140.1	TS/MM	11/04/88
Potassium (K)	1.1	0.1	258.1	KG	10/31/88
Radium, pCi/liter	ND	1	SC	SC	SC
Selenium (Se)	ND	0.005	270.2	BH	10/28/88
Silver (Ag)	ND	0.01	272.1	KG	10/31/88
Sodium (Na)	34.6	0.1	273.1	KG	10/31/88
Specific Conduct. (field)	195	NA	120.1	MA	10/20/88
Specific Conduct. (lab A)	461	NA	120.1	RAH	10/20/88
Specific Conduct. (lab B)	477	NA	120.1	RAH	10/20/88
Specific Conduct. (lab C)	450	NA	120.1	RAH	10/20/88
Specific Conduct. (lab D)	471	NA	120.1	RAH	10/20/88
Sulfate (SO_4)	14	1	375.4	TG	11/09/88
Temperature, Degrees C	17.0	NA	170.1	MA	10/20/88
Total Dissolved Solids	232	2	160.1	SW	10/28/88
Total Organic Carbon (A)	20	1	415.1	TS	11/09/88
Total Organic Carbon (B)	22	1	415.1	TS	11/09/88
Total Organic Carbon (C)	21	1	415.1	TS	11/09/88
Total Organic Carbon (D)	20	1	415.1	TS	11/09/88
Total Organic Halogen (A)	0.16	0.02	9020	GD	12/30/88
Total Organic Halogen (B)	0.23	0.02	9020	GD	12/30/88
Total Organic Halogen (C)	0.35	0.02	9020	GD	12/30/88
Total Organic Halogen (D)	0.41	0.02	9020	GD	12/30/88
Toxaphene	ND	0.02	608	GD	11/02/88
2,4-D	ND	0.001	8150	GD	12/01/88
2,4,5-TP (Silvex)	ND	0.01	8150	GD	12/01/88

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/20/88 at the Patapsco Avenue, Location: Well #25

	Results	Detection Limits	Method	Analyst	Date Test Completed
Arsenic (As)	ND	0.005	206.2	BH	10/28/88
Barium (Ba)	ND	0.5	208.1	KG	10/31/88
Cadmium (Cd)	ND	0.01	213.1	KG	10/31/88
Calcium (Ca)	25.8	0.1	215.1	KG	10/31/88
Chloride (Cl)	110	2	325.3	SW	11/09/88
Chromium (Cr), Total	ND	0.05	218.1	KG	10/31/88
Coliform Bacteria	ND	2	SM 908A	CL	10/22/88
Endrin	ND	0.05	608	GD	12/12/88
Fluoride (F)	0.12	0.05	340.2	SW	10/31/88
Ground Water Elevation	-	NA	NA	MA	10/20/88
Iron (Fe)	1.85	0.01	236.1	KG	10/31/88
Lead (Pb)	ND	0.05	239.1	KG	10/31/88
Lindane	ND	0.05	608	GD	12/12/88
Magnesium (Mg)	14.7	0.1	242.1	KG	10/31/88
Manganese (Mn)	0.32	0.01	243.1	KG	10/31/88
Mercury (Hg)	ND	0.005	245.1	FK/BH	11/15/88
Methoxychlor	ND	0.5	608	GD	12/12/88
Nitrate (N)	ND	1	353.2	MM	11/11/88
pH (field)	6.2	NA	150.1	MA	10/20/88
pH (lab A)	6.6	NA	150.1	MM	10/27/88

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/20/88 at the Patapsco Avenue, Location: Well #25

	Results	Detection Limits	Method	Analyst	Date Test Completed
Phenols (4-AAP)	0.249	0.005	140.1	TS/MM	11/04/88
Potassium (K)	9.0	0.1	258.1	KG	10/31/88
Selenium (Se)	ND	0.005	270.2	BH	10/28/88
Silver (Ag)	ND	0.01	272.1	KG	10/31/88
Sodium (Na)	62	1	273.1	KG	10/31/88
Specific Conduct. (field)	434	NA	120.1	MA	10/20/88
Specific Conduct. (lab A)	605	NA	120.1	MM	10/27/88
Sulfate (SO_4)	28	1	375.4	TG	11/09/88
Temperature, Degrees C	18.4	NA	170.1	MA	10/20/88
Total Dissolved Solids	406	1	160.1	SW	10/28/88
Total Organic Carbon (A)	200	10	415.1	TS	11/09/88
Total Organic Carbon (B)	220	10	415.1	TS	11/09/88
Total Organic Carbon (C)	220	10	415.1	TS	11/09/88
Total Organic Carbon (D)	210	10	415.1	TS	11/09/88
Total Organic Halogen (A)	110	0.2	9020	GD	12/29/88
Total Organic Halogen (B)	120	0.2	9020	GD	12/29/88
Total Organic Halogen (C)	120	0.2	9020	GD	12/29/88
Total Organic Halogen (D)	120	0.2	9020	GD	12/29/88
Toxaphene	ND	0.05	608	GD	11/02/88
2,4-D	ND	0.01	8150	TM	11/22/88
2,4,5-TP (Silvex)	ND	0.003	8150	TM	11/22/88

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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REPORT OF ANALYSIS

ORIGINAL
(Red)

Report No. 88-10-291 Report Date: January 9, 1989

Report To: FMC Corporation

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/20/88 at the Patapsco Avenue, Location: Well #27

	Results	Detection Limits	Method	Analyst	Date Test Completed
Arsenic (As)	ND	0.005	206.2	BH	10/28/88
Barium (Ba)	ND	0.5	208.1	KG	10/31/88
Cadmium (Cd)	ND	0.01	213.1	KG	10/31/88
Calcium (Ca)	110	1	215.1	KG	10/31/88
Chloride (Cl)	3400	25	325.3	SW	11/09/88
Chromium (Cr), Total	ND	0.05	218.1	KG	10/31/88
Coliform Bacteria	2	2	SM 908A	CL	10/22/88
Endrin	ND	0.001	608	GD	11/08/88
Fluoride (F)	0.07	0.05	340.2	SW	10/31/88
Gross Alpha, (pCi/liter)	ND	2	SC	SC	SC
Gross Beta, (pCi/liter)	125	3	SC	SC	SC
Ground Water Elevation	1.70	NA	NA	MA	10/20/88
Iron (Fe)	829	1	236.1	KG	10/31/88
Lead (Pb)	ND	0.05	239.1	KG	10/31/88
Lindane	ND	0.001	608	GD	11/08/88
Magnesium (Mg)	270	1	242.1	KG	10/31/88
Manganese (Mn)	3.40	0.01	243.1	KG	10/31/88
Mercury (Hg)	ND	0.005	245.1	FK/BH	11/15/88
Methoxychlor	ND	0.01	608	GD	11/08/88
Nitrate (N)	ND	0.1	353.2	MM	11/11/88
pH (field)	5.3	NA	150.1	MA	10/20/88
pH (lab A)	5.3	NA	150.1	RAH	10/21/88
pH (lab B)	5.4	NA	150.1	RAH	10/21/88
pH (lab C)	5.4	NA	150.1	RAH	10/21/88
pH (lab D)	5.4	NA	150.1	RAH	10/21/88

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) SC-Sub-contracted analysis.
(5) Analysis performed on filtered (0.45 micron) sample where appropriate.

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REPORT OF ANALYSIS

Report No. 88-10-291 Report Date: January 9, 1989

Report To: FMC Corporation Page: 26 of 26

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 10/20/88 at the Patapsco Avenue, Location: Well #27

	Results	Detection Limits	Method	Analyst	Date Test Completed
Phenols (4-AAP)	0.047	0.005	140.1	TS/MM	11/04/88
Potassium (K)	170	1	258.1	KG	10/31/88
Radium, pCi/liter	3	1	SC	SC	SC
Selenium (Se)	ND	0.005	270.2	BH	10/28/88
Silver (Ag)	ND	0.01	272.1	KG	10/31/88
Sodium (Na)	530	10	273.1	KG	10/31/88
Specific Conduct. (field)	5750	NA	120.1	MA	10/20/88
Specific Conduct. (lab A)	8570	NA	120.1	RAH	10/20/88
Specific Conduct. (lab B)	8100	NA	120.1	RAH	10/20/88
Specific Conduct. (lab C)	8050	NA	120.1	RAH	10/20/88
Specific Conduct. (lab D)	8570	NA	120.1	RAH	10/20/88
Sulfate (SO_4)	ND	10	375.4	TG	11/09/88
Temperature, Degrees C	18.8	NA	170.1	MA	10/20/88
Total Dissolved Solids	6040	2	160.1	SW	10/28/88
Total Organic Carbon (A)	410	50	415.1	TS	11/09/88
Total Organic Carbon (B)	380	50	415.1	TS	11/09/88
Total Organic Carbon (C)	400	50	415.1	TS	11/09/88
Total Organic Carbon (D)	410	50	415.1	TS	11/09/88
Total Organic Halogen (A)	8.3	0.5	9020	GD	12/30/88
Total Organic Halogen (B)	8.6	0.5	9020	GD	12/30/88
Total Organic Halogen (C)	9.0	0.5	9020	GD	12/30/88
Total Organic Halogen (D)	10	0.5	9020	GD	12/30/88
Toxaphene	ND	0.02	608	GD	11/08/88
2,4-D	ND	0.01	8150	GD	11/07/88
2,4,5-TP (Silvex)	ND	0.001	8150	GD	11/07/88

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
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ORIGINAL (Red)

FMC - Baltimore, MD
Fourth Quarter, 1988 Report
CHS Facility Permit A-023

As required in Part III G. of the subject permit, listed below are descriptions of deviations from permit conditions from October 1 to December 31, 1988.

1) 10/6: While burning MAC heels, the scrubber pH rose above the permit limit. The operator couldn't hear the alarm because he was in a noisy area. Acid was added manually to correct.
Start: 11:49
Duration: 12m 52s
Max pH: 9.7

2) 10/7: The secondary air flow rose above the permit limit, reason unknown. Remedied by manually reducing the air flow rate.
Start: 08:05
Duration: 2m 21s
Max air flow rate: 5200 acfm

3) 10/10: While switching from MAC heels to 7-OH tar feed, lost flow due to a plugged 7-OH line, causing combustion temperature to drop below the permit limit. Corrected by feeding fuel oil.
Start: 14:20
Duration: 9m 09s
Min. temperature: 480°C

4) 10/14: While switching feeds, the primary air flow rate rose above the permit limit. Remedied by manually reducing the air flow.
Start: 00:33
Duration: 2m 36s
Max. air flow: 5150 acfm

5) 10/19: The scrubber pH rose above permit limits due to mechanical problems with its controller. Feed was shut down and an instrument mechanic repaired the controller.
Start: 14:56
Duration: 13m 46s
Max pH: 10.9

6) 10/20: After completing a burn of herbicide bottoms, the pH controller overshot the addition of caustic causing a pH rise above the permit limit. Remedied by readjusting the pH controller setpoint.
Start: 10:16
Duration: 11m 0s
Max. pH 11.5

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7) 10/23: While switching feeds, the secondary air flow rose for unknown reasons. The problem was corrected automatically.
Start 03:16
Duration: 1m 06s
Max air flow: 5000 acfm

8) 10/25: The primary air flow increased for unknown reasons. The operator was working in the process and could not respond immediately. The air flow rate was decreased manually.
Start: 10:44
Duration: 2m 52s
Max air flow rate: 5400 acfm

9) 11/1: When switching feeds, the WESP voltage dropped below the permit limit. Waste methanol feed was successfully interlocked. Waste methanol feed was resumed without problems.
Start: 04:06
Duration: 4m 08s
Min voltage: 10.9 KV

10) 11/2: Due to a leaking valve on the Waste Methanol storage tank, about 4,000 pounds of waste methanol were unknowingly incinerated with MAC heels. The storage tank contents were transferred to a trailer and the valve was repaired.

11) 11/3: While burning Waste Methanol and Super Tar, and while the operator was out of the area on other duties, the Super Tar flow kicked out, causing the temperature to drop. The Waste Methanol flow was successfully interlocked, but xylene emissions continued to be fed.
Start: 00:43
Duration: 19m 31s
Min. temp. 260°C

12) 11/25: The secondary air flow rose for unknown reasons. Remedied by manually reducing the flow rate.
Start: 00:16
Duration: 4m 49s
Max air flow rate: 5500 acfm

13) 12/4: The WESP voltage dropped below the permit limit for unknown reasons. It returned to normal before any manual action was taken.
Start: 05:54
Duration: 1m 54s
Min. voltage: 18.5 KV

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(Red)

14) 12/5: The WESP voltage dropped below the permit limit four times. The cause was believed to be an internal ground. Arrangements with the vendor were made to repair on 12/7.
Start: 07:33
Duration: 4m 01s
Min. voltage: 19 KV

15) 12/6 The WESP voltage dropped below the permit limit twice. See the description on 12/5. The voltage returned to normal without any manual action taken.
Start: 01:14
Duration: 1m 34s
Min. voltage: 18.6V

16) 12/12 The automatic valve in the Waste Methanol feed line failed internally in the open position, exceeding the permit limits on Waste Methanol feed rate, on the total BTU rate, and burning Waste Methanol without the auto shutoff system in operation. The flow was stopped by closing a manual valve. The automatic valve was replaced the same day.
Start: 06:15
Duration: about 1 hr. 30 min
Max. Waste Methanol feed rate: 7870 lbs/hr
Max. BTU rate 7.5×10^7 BTU/hr

17) 12/26 While burning MAC heels and herbicide bottoms, the scrubber pH dropped below the permit limit due to herbicide bottom flowrate fluctuations. Remedied by increasing the caustic flowrate to the scrubber.
Start: 22:33
Duration: 10m 32s
Min. pH: 3.6

18) 12/31 While burning Waste Methanol, the flowrate spiked above the permit limit. The flowrate was reduced manually to correct.
Start: 08:24
Duration: 1m 05s
Max flowrate: 2160 lbs/hr

FMC Corporation

Agricultural Chemical Group
1701 East Patapsco Avenue Box 1616
Baltimore Maryland 21203
(301) 355 6400

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(Red)

FMC

April 14, 1989

Mr. Brian English
Maryland Department of the Environment
Waste Management Administration
2500 Broening Highway
Baltimore, Maryland 21224

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Dear Mr. English:

As per the requirement of Section I, Special Condition A of the Baltimore Plant's CHS Permit No. A-023 (EPA I.D. No. MDD003071875), attached is the first quarter, 1989 report listing the quantities of materials stored and incinerated on site.

Also, per the General Conditions of the CHS Permit and our Consent Order of January 13, 1986, attached are the sampling and analytical results of the groundwater monitoring program for the first quarter.

Also, pursuant to Part III G of the Permit, attached are descriptions of deviations from the incinerator operating conditions specified in Part III C of the Permit for the first quarter.

If you have any questions about the report, please do not hesitate to contact me.

Sincerely yours,

A. P. Dean

A. P. Dean
Environmental Manager

APD:ct

cc: Michael Freiheiter - Federal Environmental Protection Agency
C. James Leizear - Maryland Department of the Environment
James F. Xavier - Maryland Department of the Environment

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FMC - BALTIMORE, MD
FIRST QUARTER, 1989 REPORT
CHS FACILITY PERMIT A-023

As required by Part IIIG. of the subject permit, listed below are descriptions of deviations from permit conditions from January 1 to March 31, 1989.

1) 1/1: While burning waste methanol and super tar, the super tar flow was interrupted, causing the combustion chamber temperature to drop. This tripped the low temperature interlock, which shut off the methanol flow and caused the temperature to decrease more rapidly. The temperature dropped below the operating limit while xylene emissions were still being fed to the incinerator. Fuel oil was introduced to raise the temperature back to normal.

   Start: 00:24
   Duration: 5m 19s
   Min. temp: 660°C

2) 1/3 While burning waste methanol and super tar, the flowrate of methanol spiked above the operating limit for unknown reasons.

   Start: 08:33
   Duration: 3m 5s
   Max. flowrate: 3725 lbs/hr

3) 1/9 While burning 7-OH Tar and supertar, the secondary air flow rose above the operating limit. The flow was reduced manually to correct.

   Start: 20:19
   Duration: 1m 29s
   Max. flowrate: 5050 acfm

4) 1/11 While burning MAC heels, its feed pump failed, causing the scrubber pH to rise above the operating limit. The spare feed pump was switched in to remedy the problem.

   Start: 15:19
   Duration: 10m 28s
   Max. pH: 10:6

5) 1/21 While switching feeds to waste methanol, the flowrate initially overshot the setpoint and upper operating limit. The flow was manually reduced to remedy the problem.

Start: 03:13
Duration: 1m 7s
Max. flowrate: 2260 lb/hr

6) 1/21 While burning 7-OH tar, a water pump failed, causing the WESP make-up water flowrate and the venturi quench column make-up water flowrate to drop below operating limits. The spare water pump was switched in to remedy the problem.

Start: 14:33
Duration: 6m 0s
Min. WESP flow: 17 gpm
Min. quench flow: 208 gpm

7) 1/23 While switching feeds to waste methanol, its flowrate initially overshot the setpoint and upper operating limit. Flow was reduced manually to remedy.

Start: 03:21
Duration: 1m 5s
Max. flowrate 4900 lb/hr

8) 2/8 While burning waste methanol, the scrubber pH dropped below the operating limit. The operator believed the alarm was due to an instrument mechanic who was checking that system at the time and therefore did not initially react to it. The caustic flowrate was raised to remedy the problem.

9) 3/5 While switching feeds to waste methanol, its flowrate initially overshot the setpoint and upper operating limit. Waste methanol feed was halted and herbicide bottoms feed was substituted.

Start: 20:48
Duration: 1m 1s
Max. flowrate: 3000 lb/hr

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FMC CORPORATION - BALTIMORE, MD
FIRST QUARTER, 1989 REPORT

Permit No. A-023

EPA I.D. No. MDD003071875

Special Condition A

Materials Incinerated On-Site	Quantity (Tons)
7-Hydroxy Tar (Plant 3)	85
Claisen Tar	18
Plant 4 Waste	1126
Methallyl Chloride Waste	548
DV Ester Methanol and Chloroacetylenics	705
Basin Oil	52

Materials Stored On Side	
Glassware	3.3
P_2S_5	0.175
Hazardous Waste lbs.	224

Gascoyne Laboratories, Inc.

ORIGINAL Red)

Baltimore, MD 21224-6697

BALTIMORE, M.D.
(301) 285-8510

FAX #
(301) 285-0815

REPORT OF ANALYSIS

Report No. 89-01-438 Report Date: February 18, 1989

Report To: FMC Corporation Page: 1 of 26

Sample I.D. Monitoring well, samples taken by Gascoyne Laboratories, Inc., on 1/26/89 and 1/27/89 at the Patapsco Avenue Location: Well #16

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd)	ND	0.01	213.1	KG	02/01/89
Chloride (Cl)	1200	25	325.3	SW	02/06/89
Chromium (Cr)	0.05	0.05	218.1	KG	02/01/89
Endrin	ND	0.01	608	GD/TM	02/08/89
Ground Water Elevation	1.78	NA	NA	MA	01/27/89
Iron (Fe)	2.93	0.01	236.1	KG	02/02/89
Lindane	ND	0.01	608	GD/TM	02/08/89
Mercury (Hg)	ND	0.005	245.1	FK	02/07/89
Methoxychlor	ND	0.03	608	GD/TM	02/08/89
pH (field)	7.0	NA	150.1	MA	01/27/89
pH (lab A)	7.2	NA	150.1	MM	01/27/89
pH (lab B)	7.0	NA	150.1	MM	01/27/89
pH (lab C)	7.0	NA	150.1	MM	01/27/89
pH (lab D)	7.1	NA	150.1	MM	01/27/89
Phenols (4-AAP)	0.403	0.005	420.1	ED/MM	02/06/89
Potassium (K)	226	1	258.1	KG	02/02/89
Specific Conductance (field)	7380	NA	120.1	MA	01/27/89
Specific Conductance (lab A)	3270	NA	120.1	MM	01/27/89
Specific Conductance (lab B)	11600	NA	120.1	MM	01/27/89
Specific Conductance (lab C)	11700	NA	120.1	MM	01/27/89
Specific Conductance (lab D)	10300	NA	120.1	MM	01/27/89
Sulfate (SO_4)	28	20	375.4	SW	02/07/89
Temperature, °C	15.1	NA	170.1	MA	01/27/89

Notes: (1) ND-Not Detected.

(2) NA-Not Applicable.

(3) Results expressed as mg/liter (ppm).

(4) Digestion Method 3010 used for sample preparation (EPA SW-846).

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Please see reverse side for explanations and other information.

Gascoyne Laboratories, Inc.

Baltimore, MD 21224-6697

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REPORT OF ANALYSIS

Report No. 89-01-438 Report Date: February 18, 1989

Report To: FMC Corporation Page: 3 of 26

Sample I.D. Monitoring well, samples taken by Gascoyne Laboratories, Inc., on 1/26/89 and 1/27/89 at the Patapsco Avenue Location: Well #17

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd)	ND	0.01	213.1	KG	02/01/89
Chloride	590	5	325.3	SW	02/06/89
Chromium (Cr), Total	ND	0.05	218.1	KG	02/01/89
Endrin	ND	0.001	608	GD/TM	02/08/89
Ground Water Elevation	1.92	NA	NA	MA	01/27/89
Iron (Fe)	215	1	236.1	KG	02/02/89
Lindane	ND	0.002	608	GD/TM	02/08/89
Mecury (Hg)	ND	0.005	245.1	FK	02/07/89
Methoxchlor	ND	0.01	608	GD/TM	02/08/89
pH (field)	4.3	NA	150.1	MA	01/27/89
pH (lab A)	4.5	NA	150.1	MM	01/27/89
pH (lab B)	4.6	NA	150.1	MM	01/27/89
pH (lab C)	4.5	NA	150.1	MM	01/27/89
pH (lab D)	4.5	NA	150.1	MM	01/27/89
Phenols (4-AAP)	0.361	0.005	420.1	ED/MM	02/06/89
Potassium (K)	11.1	0.1	258.1	KG	02/02/89
Specific Conductance (field)	2910	NA	120.1	MA	01/27/89
Specific Conductance (lab A)	3210	NA	120.1	MM	01/27/89
Specific Conductance (lab B)	3220	NA	120.1	MM	01/27/89
Specific Conductance (lab C)	3370	NA	120.1	MM	01/27/89
Specific Conductance (lab D)	3250	NA	120.1	MM	01/27/89
Sulfate (SO_4)	510	10	375.4	SW	02/07/89
Temperature, °C	13.6	NA	170.1	MA	01/27/89

Notes: (1) ND-Not Detected.

(2) NA-Not Applicable.

(3) Results expressed as mg/liter (ppm).

(4) Digestion Method 3010 used for sample preparation (EPA SW-846).

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Please see reverse side for explanations and other information.

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REPORT OF ANALYSIS

Report No. 89-01-438 Report Date: February 18, 1989

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Sample I.D. Monitoring well, samples taken by Gascoyne Laboratories, Inc., on 1/26/89 and 1/27/89 at the Patapsco Avenue Location: Well #27

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd)	ND	0.01	213.1	KG	02/01/89
Chloride (Cl)	2700	25	325.3	SW	02/06/89
Chromium (Cr), Total	ND	0.05	218.1	KG	02/01/89
Endrin	ND	0.001	608	GD/TM	02/08/89
Ground Water Elevation	1.40	NA	NA	MA	01/27/89
Iron (Fe)	790	1	236.1	KG	02/02/89
Lindane	ND	0.001	608	GD/TM	02/08/89
Mercury (Hg)	ND	0.005	245.1	FK	02/07/89
Methoxychlor	ND	0.01	608	GD/TM	02/08/89
pH (field)	5.3	NA	150.1	MA	01/27/89
pH (lab A)	5.4	NA	150.1	MM	01/27/89
pH (lab B)	5.5	NA	150.1	MM	01/27/89
pH (lab C)	5.4	NA	150.1	MM	01/27/89
pH (lab D)	5.5	NA	150.1	MM	01/27/89
Phenols (4-AAP)	0.220	0.005	420.1	ED/MM	02/06/89
Potassium (K)	185	1	258.1	KG	02/02/89
Specific Conductance (field)	7390	NA	120.1	MA	01/27/89
Specific Conductance (lab A)	8760	NA	120.1	MM	01/27/89
Specific Conductance (lab B)	8780	NA	120.1	MM	01/27/89
Specific Conductance (lab C)	8040	NA	120.1	MM	01/27/89
Specific Conductance (lab D)	8600	NA	120.1	MM	01/27/89
Sulfate (SO_4)	35	10	375.4	SW	02/07/89
Temperature, °C	15.5	NA	150.1	MA	01/27/89

Notes: (1) ND-Not Detected.

(2) NA-Not Applicable.

(3) Results expressed as mg/liter (ppm).

(4) Digestion Method 3010 used for sample preparation (EPA SW-846).

Irving M. Kipnis

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Irving M. Kipnis, Ph.D.

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ORIGINAL (Red)

REPORT OF ANALYSIS

Report No. 89-01-438 Report Date: February 18, 1989

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Sample I.D. Monitoring well, samples taken by Gascoyne Laboratories, Inc., on 1/26/89 and 1/27/89 at the Patapsco Avenue Location: Well #12

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd)	ND	0.01	213.2	FK	02/02/89
Chloride (Cl)	540	10	325.3	SW	02/06/89
Chromium (Cr),Hexavalent	ND	0.01	SM 312B	MM	01/27/89
Chromium (Cr), Total	ND	0.01	218.1	KG	02/01/89
Copper (Cu)	0.02	0.01	220.1	KG	02/01/89
Endrin	ND	0.001	608	GD/TM	02/08/89
Ground Water Elevation	7.36	NA	NA	MA	01/27/89
Iron (Fe)	6.20	0.01	236.1	KG	02/02/89
Lindane	ND	0.001	608	GD/TM	02/08/89
Mercury (Hg)	ND	0.005	245.1	FK	02/07/89
Methoxychlor	ND	0.01	608	GD/TM	02/08/89
Nickel (Ni)	0.18	0.02	249.1	KG	02/02/89
pH (field)	5.7	NA	150.1	MA	01/27/89
pH (lab A)	5.9	NA	150.1	MM	01/27/89
Phenols (4-AAP)	0.081	0.005	420.1	ED/MM	02/06/89
Potassium (K)	15.3	0.01	258.1	KG	02/02/89
Specific Conductance (field)	1887	NA	120.1	MA	01/27/89
Specific Conductance	2510	NA	120.1	MM	01/27/89
Sulfate (SO_4)	250	10	375.4	SW	02/07/89
Temperature, °C	14.3	NA	170.1	MA	01/27/89
Total Dissolved Solids	1600	1	160.1	ED	02/10/89

Notes: (1) ND-Not Detected.

(2) NA-Not Applicable.

(3) Results expressed as mg/liter (ppm).

(4) Digestion Method 3010 used for sample preparation (EPASW-846).

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Please see reverse side for explanations and other information.

ORIGINAL (Red)

Groundwater 1st Quarter 1989

Compound	Well 12	Well 12A	Well 13	Well 13A	Well 14	Well 15
Aniline	ND	ND	6725	ND	ND	ND
Ethyl Carbanate	ND	ND	ND	ND	ND	ND
Methyl carbanate	ND	ND	ND	ND	ND	ND
DAP	ND	ND	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND	ND
Ethion	ND	ND	ND	ND	ND	ND
Lindane	ND	ND	ND	ND	ND	ND
Methoxychlor	ND	ND	ND	ND	ND	ND
ONP	ND	ND	ND	ND	ND	ND
Pyrethrum	ND	ND	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND	ND	ND
Xylenes	32	44	440	26	61	127
Toluidine	ND	ND	5419	ND	ND	ND

All results are in ug/ml

Gascoyne Laboratories, Inc.

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ORIGINAL (Red)

REPORT OF ANALYSIS

Report No. 89-01-438 Report Date: February 18, 1989

Report To: FMC Corporation Page: 9 of 26

Sample I.D. Monitoring well, samples taken by Gascoyne Laboratories, Inc., on 1/26/89 and 1/27/89 at the Patapsco Avenue Location: Well #12A

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd)	ND	0.01	213.2	FK	02/02/89
Chloride (Cl)	300	2	325.3	SW	02/06/89
Chromium (Cr),Hexavalent	ND	0.1	SM 312B	MM	01/27/89
Chromium (Cr), Total	ND	0.05	218.1	KG	02/01/89
Copper (Cu)	0.03	0.01	220.1	KG	02/01/89
Endrin	ND	0.001	608	GD/TM	02/08/89
Ground water Elevation	3.66	NA	NA	MA	01/27/89
Iron (Fe)	200	1	236.1	KG	02/02/89
Lindane	ND	0.002	608	GD/TM	02/08/89
Mercury (Hg)	ND	0.005	245.1	FK	02/07/89
Methoxychlor	ND	0.01	608	GD/TM	02/08/89
Nickel (Ni)	ND	0.02	249.1	KG	02/02/89
pH (field)	6.0	NA	150.1	MA	01/27/89
pH (lab A)	6.1	NA	150.1	MM	01/27/89
Phenols (4-AAP)	1.342	0.005	420.1	ED/MM	02/06/89
Potassium (K)	65.9	0.1	258.1	KG	02/02/89
Specific Conductance (field)	1580	NA	120.1	MA	01/27/89
Specific Conductance (lab A)	1730	NA	120.1	MM	01/27/89
Sulfate (SO_4)	250	10	375.4	SW	02/07/89
Temperature, °C	15.4	NA	170.1	MA	01/27/89
Total Dissolved Solids	1200	1	160.1	ED	02/10/89

Notes: (1) ND-Not Detected.

(2) NA-Not Applicable.

(3) Results expressed as mg/liter (ppm).

(4) Digestion Method 3010 used for sample preparation (EPA SW-846).

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Please see reverse side for explanations and other information.

Gascoyne Laboratories, Inc.

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ORIGINAL (Red)

REPORT OF ANALYSIS

Report No. 89-01-438 Report Date: February 18, 1989

Report To: FMC Corporation Page: 11 of 26

Sample I.D. Monitoring well, samples taken by Gascoyne Laboratories, Inc., on 1/26/89 and 1/27/89 at the Patapsco Avenue Location: Well #13

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd)	ND	0.01	213.1	KG	02/01/89
Chloride (Cl)	2600	25	325.3	SW	02/06/89
Chromium (Cr),Hexavalent	ND	1	SM 312B	MM	01/27/89
Chromium (Cr), Total	0.14	0.05	218.1	KG	02/01/89
Copper (Cu)	0.04	0.01	220.1	KG	02/01/89
Endrin	ND	0.001	608	GD/TM	02/08/89
Ground Water Elevation	5.15	NA	NA	MA	01/27/89
Iron (Fe)	200	1	236.1	KG	w02/02/89
Lindane	ND	0.006	608	GD/TM	02/08/89
Mercury (Hg)	ND	0.005	245.1	FK	02/07/89
Methoxychlor	ND	0.01	608	GD/TM	02/08/89
Nickel (Ni)	0.15	0.02	249.1	KG	02/02/89
pH (field)	6.6	NA	150.1	MA	01/27/89
pH (lab A)	6.7	NA	150.1	MM	01/27/89
Phenols(4-AAP)	0.503	0.005	420.1	ED/MM	02/06/89
Potassium (K)	1200	10	258.1	KG	02/02/89
Specific Conductance (field)	10300	NA	120.1	MA	01/27/89
Specific Conductance (lab A)	11400	NA	120.1	MM	01/27/89
Sulfate (SO_4)	ND	20	375.4	SW	02/07/89
Temperature, °C	15.4	NA	170.1	MA	01/27/89
Total Dissolved Solids	8400	1	160.1	ED	02/10/89

Notes: (1) ND-Not Detected.

(2) NA-Not Applicable.

(3) Results expressed as mg/liter (ppm).

(4) Digestion Method 3010 used for sample preparation (EPA SW-846).

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Please see reverse side for explanations and other information.

Gascoyne Laboratories, Inc.

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ORIGINAL (Red)

REPORT OF ANALYSIS

Report No. 89-01-438 Report Date: February 18, 1989

Report To: FMC Corporation Page: 13 of 26

Sample I.D. Monitoring well, samples taken by Gascoyne Laboratories, Inc., on 1/26/89 and 1/27/89 at the Patapsco Avenue Location: Well #13A

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd)	ND	0.01	213.1	KG	02/01/89
Chloride (Cl)	1800	25	325.3	SW	02/06/89
Chromium (Cr),Hexavalent	ND	0.1	SM 312B	MM	01/27/89
Chromium (Cr), Total	ND	0.05	218.1	KG	02/01/89
Copper (Cu)	0.03	0.01	220.1	KG	02/01/89
Endrin	ND	0.001	608	GD/TM	02/08/89
Ground Water Elevation	3.30	NA	NA	MA	01/27/89
Iron (Fe)	1200	10	236.1	KG	02/02/89
Lindane	ND	0.001	608	GD/TM	02/08/89
Mercury (Hg)	ND	0.005	245.1	FK	02/07/89
Methoxychlor	ND	0.04	608	GD/TM	02/08/89
Nickel (Ni)	0.24	0.02	249.1	KG	02/02/89
pH (field)	5.6	NA	150.1	MA	01/27/89
pH (lab A)	5.8	NA	150.1	MM	01/27/89
Phenols (4-AAP)	0.081	0.005	420.1	ED/MM	02/06/89
Potassium (K)	57.3	0.1	258.1	KG	02/02/89
Specific Conductance (field)	5360	NA	120.1	MA	01/27/89
Specific Conductance (lab A)	6200	NA	120.1	MM	01/27/89
Sulfate (SO_4)	450	100	375.4	SW	02/07/89
Temperature, °C	14.2	NA	170.1	MA	01/27/89
Total Dissolved Solids	5500	1	160.1	ED	02/10/89

Notes: (1) ND-Not Detected.

(2) NA- Not Applicable.

(3) Results expressed as mg/liter (ppm).

(4) Digestion Method 3010 used for sample preparation (EPA SW-846).

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Please see reverse side for explanations and other information.

Gascoyne Laboratories, Inc.

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FAX #
(301) 285-0815

REPORT OF ANALYSIS

Report No. 89-01-438 Report Date: February 18, 1989

Report To: FMC Corporation Page: 15 of 26

Sample I.D. Monitoring well, samples taken by Gascoyne Laboratories, Inc., on 1/26/89 and 1/27/89 at the Patapsco Avenue Location: Well #14

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd)	ND	0.01	213.1	KG	02/01/89
Chloride (Cl)	450	2	325.3	SW	02/06/89
Chromium (Cr),Hexavalent	ND	0.1	SM 312B	MM	01/27/89
Chromium (Cr), Total	ND	0.05	218.1	KG	02/01/89
Copper (Cu)	0.02	0.01	220.1	KG	02/01/89
Endrin	ND	0.001	608	GD/TM	02/08/89
Ground Water Elevation	1.43	NA	NA	MA	01/27/89
Iron (Fe)	76.3	0.1	236.1	KG	02/02/89
Lindane	ND	0.001	608	GD/TM	02/08/89
Mercury (Hg)	ND	0.005	245.1	FK	02/07/89
Methoxychlor	ND	0.01	608	GD/TM	02/08/89
Nickel (Ni)	ND	0.02	249.1	KG	02/02/89
pH (field)	6.6	NA	150.1	MA	01/27/89
pH (lab A)	6.5	NA	150.1	MM	01/27/89
Phenols (4-AAP)	0.053	0.005	420.1	ED/MM	02/06/89
Potassium (K)	59.9	0.1	258.1	KG	02/02/89
Specific Conductance (field)	2400	NA	120.1	MA	01/27/89
Specific Conductance (lab A)	2360	NA	120.1	MM	01/27/89
Sulfate (SO_4)	84	20	375.4	SW	02/07/89
Temperature, °C	15.9	NA	170.1	MA	01/27/89
Total Dissolved Solids	1400	1	160.1	ED	02/10/89

Notes: (1) ND-Not Detected.

(2) NA-Not Applicable.

(3) Results expressed as mg/liter (ppm).

(4) Digestion Method 3010 used for sample preparation (EPA SW-846).

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Please see reverse side for explanations and other information.

Gascoyne Laboratories, Inc.

Baltimore, MD 21224-6697

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ORIGINAL (Red)

REPORT OF ANALYSIS

Report No. 89-01-438 Report Date: February 18, 1989

Report To: FMC Corporation Page: 17 of 26

Sample I.D. Monitoring well, samples taken by Gascoyne Laboratories, Inc., on 1/26/89 and 1/27/89 at the Patapsco Avenue Location: Well #15

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd)	ND	0.01	213.1	KG	02/01/89
Chloride (Cl)	5400	50	325.3	SW	02/06/89
Chromium (Cr) Hexavalent	ND	1	SM 312B	MM	01/27/89
Chromium (Cr), Total	0.05	0.05	218.1	KG	02/01/89
Copper (Cu)	0.02	0.01	220.1	KG	02/01/89
Endrin	ND	0.003	608	GD/TM	02/08/89
Ground Water Elevation	9.23	NA	NA	MA	01/27/89
Iron (Fe)	0.31	0.01	236.1	KG	02/02/89
Lindane	ND	0.002	608	GD/TM	02/08/89
Mercury (Hg)	ND	0.005	245.1	FK	02/07/89
Methoxychlor	ND	0.04	608	GD/TM	02/08/89
Nickel (Ni)	0.06	0.02	249.1	KG	02/02/89
pH (field)	6.6	NA	150.1	MA	01/27/89
pH (lab A)	6.7	NA	150.1	MM	01/27/89
Phenols(4-AAP)	23	0.5	420.1	ED/MM	02/06/89
Potassium (K)	1800	10	258.1	KG	02/02/89
Specific Conductance (field)	21900	NA	120.1	MA	01/27/89
Specific Conductance (lab A)	22900	NA	120.1	MM	01/27/89
Sulfate (SO_4)	64	20	375.4	SW	02/07/89
Temperature, °C	11.6	NA	170.1	MA	01/27/89
Total Dissolved Solids	2100	1	160.1	ED	02/10/89

Notes: (1) ND-Not Detected.

(2) NA-Not Applicable.

(3) Results expressed as mg/liter (ppm).

(4) Digestion Method 3010 used for sample preparation (EPA SW-846).

Irving M. Kipnis

Laboratory Director
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REPORT OF ANALYSIS

Report No. 89-01-438 Report Date: February 18, 1989

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Sample I.D. Monitoring well, samples taken by Gascoyne Laboratories, Inc., on 1/26/89 and 1/27/89 at the Patapsco Avenue Location: Well #22

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd)	ND	0.01	213.1	KG	02/01/89
Chloride	250	2	325.3	SW	02/06/89
Chromium (Cr), Total	ND	0.05	218.1	KG	02/01/89
Endrin	ND	0.001	608	GD/TM	02/08/89
Ground Water Elevation	14.36	NA	NA	MA	01/27/89
Iron (Fe)	25.3	0.1	236.1	KG	02/02/89
Lindane	ND	0.001	608	GD/TM	02/08/89
Mercury (Hg)	ND	0.005	245.1	FK	02/07/89
Methoxychlor	ND	0.01	608	GD/TM	02/08/89
pH (field)	5.6	NA	150.1	MA	01/27/89
pH (lab A)	5.9	NA	150.1	MM	01/27/89
pH (lab B)	5.9	NA	150.1	MM	01/27/89
pH (lab C)	5.9	NA	150.1	MM	01/27/89
pH (lab D)	5.9	NA	150.1	MM	01/27/89
Phenols (4-AAP)	0.114	0.005	420.1	ED/MM	02/06/89
Potassium (K)	2.2	0.1	258.1	KG	02/02/89
Specific Conductance (field)	1120	NA	120.1	MA	01/27/89
Specific Conductance (lab A)	1190	NA	120.1	MM	01/27/89
Specific Conductance (lab B)	1130	NA	120.1	MM	01/27/89
Specific Conductance (lab C)	1200	NA	120.1	MM	01/27/89
Specific Conductance (lab D)	1200	NA	120.1	MM	01/27/89
Sulfate (SO_4)	17	10	375.4	SW	02/07/89
Temperature, °C	12.4	NA	170.1	MA	01/27/89
Total Dissolved Solids	700	1	160.1	ED	02/10/89

Notes: (1) ND-Not Detected.

(2) NA- Not Applicable.

(3) Results expressed as mg/liter (ppm).

(4) Digestion Method 3010 used for sample preparation (EPA SW-846).

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

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REPORT OF ANALYSIS

Report No. 89-01-438 Report Date: February 18, 1989

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Sample I.D. Monitoring well, samples taken by Gascoyne Laboratories, Inc., on 1/26/89 and 1/27/89 at the Patapsco Avenue Location: Well #23

	Results	Detection Limits	Method	Analyst	Date Test Completed
Chromium (Cr)	ND	0.01	213.1	KG	02/01/89
Chloride (Cl)	160	5	325.3	SW	02/06/89
Chromium (Cr), Total	ND	0.05	218.1	KG	02/01/89
Endrin	ND	0.003	608	GD/TM	02/08/89
Ground Water Elevation	14.21	NA	NA	MA	01/27/89
Iron (Fe)	52.9	0.1	236.1	KG	02/02/89
Lindane	ND	0.001	608	GD/TM	02/08/89
Mercury (Hg)	ND	0.005	245.1	FK	02/07/89
Methoxychlor	ND	0.02	608	GD/TM	02/08/89
pH (field)	5.9	NA	150.1	MA	01/27/89
pH (lab A)	6.1	NA	150.1	MM	01/27/89
pH (lab B)	6.1	NA	150.1	MM	01/27/89
pH (lab C)	6.0	NA	150.1	MM	01/27/89
pH (lab D)	6.0	NA	150.1	MM	01/27/89
Phenols (4-AAP)	0.373	0.005	420.1	ED/MM	02/06/89
Potassium (K)	1.3	0.1	258.1	KG	02/02/89
Specific Conductance (field)	875	NA	120.1	MA	01/27/89
Specific Conductance (lab A)	811	NA	120.1	MM	01/27/89
Specific Conductance (lab B)	807	NA	120.1	MM	01/27/89
Specific Conductance (lab C)	825	NA	120.1	MM	01/27/89
Specific Conductance (lab D)	815	NA	120.1	MM	01/27/89
Sulfate (SO_4)	2.7	10	375.4	SW	02/07/89
Temperature, °C	15.9	NA	170.1	MA	01/27/89
Total Dissolved Solids	340	1	160.1	ED	02/10/89

Notes: (1) ND-Not Detected.

(2) NA-Not Applicable.

(3) Results expressed as mg/liter (ppm).

(4) Digestion Method 3010 used for sample preparation (EPA SW-846).

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Please see reverse side for explanations and other information.

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REPORT OF ANALYSIS

Report No. 89-01-438 Report Date: February 18, 1989

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Sample I.D. Monitoring well, samples taken by Gascoyne Laboratories, Inc., on 1/26/89 and 1/27/89 at the Patapsco Avenue Location: Well #24

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cr)	ND	0.01	213.1	KG	02/01/89
Chloride (Cl)	98	2	325.3	SW	02/06/89
Chromium (Cr), Total	ND	0.05	218.1	KG	02/01/89
Endrin	ND	0.001	608	GD/TM	02/08/89
Ground Water Elevation	13.88	NA	NA	MA	01/27/89
Iron (Fe)	51.4	0.1	236.1	KG	02/02/89
Lindane	ND	0.001	608	GD/TM	02/08/89
Mercury (Hg)	ND	0.005	245.1	FK	02/07/89
Methoxychlor	ND	0.01	608	GD/TM	02/08/89
pH (field)	5.9	NA	150.1	MA	01/27/89
pH (lab A)	6.2	NA	150.1	MM	01/27/89
pH (lab B)	6.2	NA	150.1	MM	01/27/89
pH (lab C)	6.1	NA	150.1	MM	01/27/89
pH (lab D)	6.1	NA	150.1	MM	01/27/89
Phenols (4-AAP)	0.040	0.005	420.1	ED/MM	02/06/89
Potassium (K)	1.0	0.1	258.1	KG	02/02/89
Specific Conductance (field)	517	NA	120.1	MA	01/27/89
Specific Conductance (lab A)	498	NA	120.1	MM	01/27/89
Specific Conductance (lab B)	495	NA	120.1	MM	01/27/89
Specific Conductance (lab C)	509	NA	120.1	MM	01/27/89
Specific Conductance (lab D)	494	NA	120.1	MM	01/27/89
Sulfate (SO_4)	ND	10	375.4	SW	02/07/89
Temperature, °C	15.7	NA	170.1	MA	01/27/89
Total Dissolved Solids	200	1	160.1	ED	02/10/89

Notes: (1) ND-Not Detected.

(2) NA-Not Applicable.

(3) Results expressed as mg/liter (ppm).

(4) Digestion Method 3010 used for sample preparation (EPA SW-846).

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Please see reverse side for explanations and other information.

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ORIGINAL

REPORT OF ANALYSIS

Report No. 89-01-438 Report Date: February 18, 1989

Report To: FMC Corporation

Sample I.D. Monitoring well, samples taken by Gascoyne Laboratories, Inc., on 1/26/89 and 1/27/89 at the Patapsco Avenue Location: Well #25

	Results	Detection Limits	Method	Analyst	Date Test Completed
Chromium (Cr)	ND	0.01	213.2	FK	02/02/89
Chloride (Cl)	1300	10	325.3	SW	02/06/89
Chromium (Cr), Total	0.05	0.05	218.1	KG	02/01/89
Endrin	ND	0.001	608	GD/TM	02/08/89
Ground Water Elevation	26.86	NA	NA	MA	01/27/89
Iron (Fe)	3.77	0.01	236.1	KG	02/02/89
Lindane	ND	0.001	608	GD/TM	02/08/89
Mercury (Hg)	ND	0.005	245.1	FK	02/07/89
Methoxychlor	ND	0.02	608	GD/TM	02/08/89
pH (field)	6.6	NA	150.1	MA	01/27/89
pH (lab A)	6.9	NA	150.1	MM	01/27/89
pH (lab B)	6.9	NA	150.1	MM	01/27/89
pH (lab C)	7.2	NA	150.1	MM	01/27/89
pH (lab D)	6.8	NA	150.1	MM	01/27/89
Phenols (4-AAP)	0.465	0.005	420.1	ED/MM	02/06/89
Potassium (K)	20.4	0.1	258.1	KG	02/02/89
Specific Conductance (field)	4320	NA	120.1	MA	01/27/89
Specific Conductance (lab A)	4700	NA	120.1	MM	01/27/89
Specific Conductance (lab B)	4720	NA	120.1	MM	01/27/89
Specific Conductance (lab C)	4480	NA	120.1	MM	01/27/89
Specific Conductance (lab D)	4730	NA	120.1	MM	01/27/89
Sulfate (SO_4)	59	10	375.4	SW	02/07/89
Temperature, °C	14.9	NA	170.1	MA	01/27/89
Total Dissolved Solids	2700	1	160.1	ED	02/10/89

Notes: (1) ND-Not Detected.

(2) NA-Not Applicable.

(3) Results expressed as mg/liter (ppm).

(4) Digestion Method 3010 used for sample preparation (EPA SW-846).

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

FMC Corporation

Agricultural Chemical Group
1701 East Patapsco Avenue Box 1616
Baltimore Maryland 21203
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ORIGINAL
(Red)

FMC

October 13, 1989

Mr. Brian English
Maryland Department of the Environment
Waste Management Administration
2500 Broening Highway
Baltimore, Maryland 21224

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Dear Mr. English:

Pursuant to FMC's CHS Permit No. A-023, Section I, Special Condition A, attached is the third quarter 1989 listing of quantities of materials stored and incinerated on-site.

Also, pursuant to the general conditions of the subject permit and our Consent Order of January 13, 1986, attached are the sampling and analytical results of the groundwater monitoring program for the third quarter.

Also, pursuant to Part III G of the subject permit, attached are descriptions of deviations from the incinerator operating conditions in Part C for the third quarter.

Sincerely yours,

John J. Giblin

John G. Giblin
Environmental Engineer

cc: Michael Freiheiter - U.S. Environmental Protection Agency
C. James Leizear - Maryland Department of the Environment
James F. Xavier - Maryland Department of the Environment

ORIGINAL
(Red)

FMC CORPORATION - BALTIMORE, MARYLAND
THIRD QUARTER - 1989 REPORT

Permit No. A023
EPA I.D. No. MDD003071875
Special Condition A

MATERIALS INCINERATED ON-SITE	QUANTITY (TONS)
Plant 4 Waste	969
Basin Oils	44
Methallyl Chloride (MAC) Waste	523
DV Ester Waste Methanol	631
Herbicide Bottoms	69
Waste Oil	0

MATERIALS STORED ON-SITE	QUANTITY (TONS)
Glassware	2.1
Phosphorous Pentasulfide	0.4
Hazardous Waste	242

ORIGINAL
(Red)

FMC CORPORATION - BALTIMORE, MARYLAND
THIRD QUARTER, 1989 REPORT

Permit No. A-023

Pursuant to Part III. G. of the subject permit, listed below are descriptions of deviations from permit conditions which occurred from July 1 to September 30, 1989.

1) 7/4 While burning a mixture of Basin Oils and MAC waste the feed rate spiked above the operating limit. The erratic flow was caused by inconsistent feed quality. The flowrate was reduced, then shutdown to remedy the problem.
Start Time: 12:43
Max. flowrate: 3980 lbs/hr
Duration: 1m 19s

2) 8/9 While burning MAC waste the combustion chamber pressure was above the operating limit for unknown reasons. The pressure returned within limits before corrective action could be taken.
Start time: 11:54
Max. pressure: 0.2" WG
Duration: 1m 28s

3) 8/14 When switching feeds from 7-OH tar to MAC waste, the MAC heels flowrate overshot the setpoint and spiked above the operating limit. The flow was reduced to remedy the problem.
Start time: 11:40
Max. flowrate: 3160 lb/hr
Duration: 1:03

4) 9/12 While burning waste methanol the quench water flowrate dropped below the operating limit for unknown reasons. The operator was attending to other activities at the time, but the flowrate had returned to normal when he returned several minutes later.
Start time: 02:33
Min. Flowrate: 236 gpm
Duration: 4m 22s

5) 9/16 While burning waste methanol the quench water flowrate dropped below the operating limit for unknown reasons. The valve was stroked to attempt to remedy the problem, but apparently without success. However, the flowrate soon returned to normal on its own. The effect on supply pressure of other large take-offs in the water supply system is being investigated.
Start time: 10:29
Min. Flowrate: 236 gpm
Duration: 1m 7s

6) 9/25 After switching from 7-OH tar to MAC waste the scrubber pH rose above the operating limit due to underdamped response of the controller. The operator was busy outside in a high noise area so did not hear the alarm. When he returned to the control room, he switched the feed to fuel oil then shut down the incinerator.
Start time: 07:17
Max. pH: 10.7
Duration: 12m 39s

Gascoyne Laboratories, Inc.

ORIGINAL (Red)

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REPORT OF ANALYSIS

Report No. 89-08-198 Report Date: September 12, 1989

Report To: FMC Corporation Page: 1 of 28

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #10

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd) *	ND	0.01	EPA 213.1	KG	08/21/89
Chloride (Cl) *	8900	50	EPA 325.3	RAH	08/10/89
Chromium (Cr), Total *	0.05	0.05	EPA 218.1	KG	08/21/89
Endrin	ND	0.001	EPA 8080	GD/RJ	08/22/89
Ground Water Elevation (field)	6.8	NA	NA	TS/SC	08/09/89
Iron (Fe) *	202	1	EPA 236.1	KG	08/21/89
Lindane	ND	0.001	EPA 8080	GD/RJ	08/22/89
Mercury (Hg) *	ND	0.005	EPA 245.1	FK	08/15/89
Methoxychlor	ND	0.007	EPA 8080	GD/RJ	08/22/89
pH (field)	6.4	NA	EPA 150.1	TS/SC	08/09/89
pH (lab A)	6.5	NA	EPA 150.1	CM	08/09/89
pH (lab B)	6.5	NA	EPA 150.1	CM	08/09/89
pH (lab C)	6.5	NA	EPA 150.1	CM	08/09/89
pH (lab D)	6.5	NA	EPA 150.1	CM	08/09/89
Phenols (4-AAP)	1.4	0.5	EPA 420.1	MM/TS	08/18/89
Potassium (K) *	1600	10	EPA 258.1	KG	08/21/89
Specific Conductance (field)	20900	NA	EPA 120.1	TS/SC	08/09/89
Specific Conductance (lab A)	25500	NA	EPA 120.1	MM	08/09/89
Specific Conductance (lab B)	24500	NA	EPA 120.1	MM	08/09/89
Specific Conductance (lab C)	25900	NA	EPA 120.1	MM	08/09/89
Specific Conductance (lab D)	24700	NA	EPA 120.1	MM	08/09/89
Sulfate (SO_4) *	4200	1000	EPA 375.4	SW	08/25/89
Temperature, °C (field)	20.4	NA	EPA 170.1	TS/SC	08/09/89
Total Dissolved Solids *	18000	4	EPA 160.1	CL/CM	08/16/89

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.
(5) *-Specific Conductance expressed as micromhos/cm.

Irving M. Kipnis

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ORIGINAL (Red)

REPORT OF ANALYSIS

Report No. 89-08-198 Report Date: September 12, 1989

Report To: FMC Corporation Page: 2 of 28

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #10

	Results	Detection Limits	Method	Analyst	Date Test Completed
Total Organic Carbon (A) *	820	10	EPA 415.1	MM	08/11/89
Total Organic Carbon (B) *	800	10	EPA 415.1	MM	08/11/89
Total Organic Carbon (C) *	820	10	EPA 415.1	MM	08/11/89
Total Organic Carbon (D) *	800	10	EPA 415.1	MM	08/11/89
Total Organic Halogen (A)	64	5	EPA 9020	CL/CM	08/22/89
Total Organic Halogen (B)	78	5	EPA 9020	CL/CM	08/22/89
Total Organic Halogen (C)	75	5	EPA 9020	CL/CM	08/22/89
Total Organic Halogen (D)	71	5	EPA 9020	CL/CM	08/22/89
Toxaphene	ND	0.04	EPA 8080	GD/RJ	08/22/89
2,4-D	ND	0.02	EPA 8150	GD	08/17/89
2,4,5-TP (Silvex)	ND	0.01	EPA 8150	GD	08/17/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Gascoyne Laboratories, Inc.

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REPORT OF ANALYSIS

Report No. 89-08-198 Report Date: September 12, 1989

Report To: FMC Corporation Page: 3 of 28

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #12

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd) *	ND	0.01	EPA 213.1	KG	08/21/89
Chloride (Cl) *	560	10	EPA 325.3	RAH	08/10/89
Chromium (Cr), Hexavalent *	ND	0.1	SM 312B	TS	08/10/89
Chromium (Cr), Total *	ND	0.05	EPA 218.1	KG	08/21/89
Copper (Cu)	0.02	0.01	EPA 220.1	KG	08/21/89
Endrin	ND	0.001	EPA 8080	GD/RJ	08/21/89
Ground Water Elevation (field)	8.6	NA	NA	MA/SC	08/08/89
Iron (Fe) *	26.0	0.1	EPA 236.1	KG	08/21/89
Lindane	ND	0.001	EPA 8080	GD/RJ	08/21/89
Mercury (Hg) *	ND	0.005	EPA 245.1	FK	08/15/89
Methoxychlor	ND	0.003	EPA 8080	GD/RJ	08/22/89
Nickel (Ni)	0.15	0.02	EPA 249.1	KG	08/21/89
pH (field)	5.6	NA	EPA 150.1	MA/SC	08/08/89
pH (lab A)	5.8	NA	EPA 150.1	MM	08/08/89
Phenols (4-AAP)	0.07	0.005	EPA 420.1	MM/TS	08/18/89
Potassium (K) *	5.7	0.1	EPA 258.1	KG	08/21/89
Specific Conductance (field)	2070	NA	EPA 120.1	MA/SC	08/08/89
Specific Conductance (lab A)	2260	NA	EPA 120.1	MM	08/08/89
Sulfate (SO_4) *	490	100	EPA 375.4	SW	08/25/89
Temperature, °C (field)	16.5	NA	EPA 170.1	MA/SC	08/08/89
Total Dissolved Solids *	1490	1	EPA 160.1	CL/CM	08/16/89

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.
(5) *-Specific Conductance expressed as micromhos/cm.

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ORIGINAL (Red)

REPORT OF ANALYSIS

Report No. 89-08-198 Report Date: September 12, 1989

Report To: FMC Corporation

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Averue location.

Well Number: #12

	Results	Detection Limits	Method	Analyst	Date Test Completed
Total Organic Carbon (A) *	50	1	EPA 415.1	MM	08/11/89
Total Organic Halogen (A)	2.8	0.1	EPA 9020	CM	08/19/89
Toxaphene	ND	0.03	EPA 8080	GD/RJ	08/21/89
Zinc (Zn)	0.12	0.01	EPA 289.1	KG	08/21/89
2,4-D	ND	0.005	EPA 8150	GD/JS	08/21/89
2,4,5-TP (Silvex)	ND	0.002	EPA 8150	GD/JS	08/21/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) *-Analyses performed on filtered (0.45 micron) sample.

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REPORT OF ANALYSIS

Report No. 89-08-198 Report Date: September 12, 1989

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #12A

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd) *	ND	0.01	EPA 213.1	KG	08/21/89
Chloride (Cl) *	310	2	EPA 325.3	RAH	08/10/89
Chromium (Cr), Hexavalent *	ND	0.1	SM 312B	TS	08/10/89
Chromium (Cr), Total *	ND	0.05	EPA 218.1	KG	08/21/89
Copper (Cu)	0.02	0.01	EPA 220.1	KG	08/21/89
Endrin	ND	0.002	EPA 8080	GD/RJ	08/18/89
Ground Water Elevation (field)	4.8	NA	NA	MA/SC	08/08/89
Iron (Fe) *	209	1	EPA 236.1	KG	08/21/89
Lindane	ND	0.002	EPA 8080	GD/RJ	08/18/89
Mercury (Hg) *	ND	0.005	EPA 245.1	FK	08/15/89
Methoxychlor	ND	0.01	EPA 8080	GD/RJ	08/18/89
Nickel (Ni)	ND	0.02	EPA 249.1	KG	08/21/89
pH (field)	6.1	NA	EPA 150.1	MA/SC	08/08/89
pH (lab A)	6.2	NA	EPA 150.1	MM	08/08/89
Phenols (4-AAP)	1.8	0.05	EPA 420.1	TS/MM	08/18/89
Potassium (K) *	60.1	0.1	EPA 258.1	KG	08/21/89
Specific Conductance (field)	1680	NA	EPA 120.1	MA/SC	08/08/89
Specific Conductance (lab A)	1670	NA	EPA 120.1	MM	08/08/89
Sulfate (SO_4) *	960	200	EPA 375.4	SW	08/25/89
Temperature, °C (field)	15.5	NA	EPA 170.1	MA/SC	08/08/89
Total Dissolved Solids *	1330	1	EPA 160.1	CL/CM	08/16/89

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.
(5) *-Specific Conductance expressed as micromhos/cm.

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REPORT OF ANALYSIS

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #12A

	Results	Detection Limits	Method	Analyst	Date Test Completed
Total Organic Carbon (A) *	53	1	EPA 415.1	MM	08/11/89
Total Organic Halogen (A)	3.4	0.2	EPA 9020	CM	08/19/89
Toxaphene	ND	0.07	EPA 8080	GD/RJ	08/18/89
Zinc (Zn)	0.04	0.01	EPA 289.1	KG	08/21/89
2,4-D	ND	0.005	EPA 8150	GD/RJ	08/18/89
2,4,5-TP (Silvex)	ND	0.005	EPA 8150	GD/RJ	08/18/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) *-Analyses performed on filtered (0.45 micron) sample.

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #13

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd) *	ND	0.01	EPA 213.1	KG	08/21/89
Chloride (Cl) *	1500	25	EPA 325.3	RAH	08/10/89
Chromium (Cr), Hexavalent *	ND	0.1	SM 312B	TS	08/10/89
Chromium (Cr), Total *	0.05	0.05	EPA 218.1	KG	08/21/89
Copper (Cu)	0.01	0.01	EPA 220.1	KG	08/21/89
Endrin	ND	0.003	EPA 8080	GD/RJ	08/18/89
Ground Water Elevation (field)	7.2	NA	NA	MA/SC	08/08/89
Iron (Fe) *	45.9	0.1	EPA 236.1	KG	08/21/89
Lindane	ND	0.003	EPA 8080	GD/RJ	08/18/89
Mercury (Hg) *	ND	0.005	EPA 245.1	FK	08/15/89
Methoxychlor	ND	0.02	EPA 8080	GD/RJ	08/18/89
Nickel (Ni)	0.03	0.02	EPA 249.1	KG	08/21/89
pH (field)	6.6	NA	EPA 150.1	MA/SC	08/08/89
pH (lab A)	6.7	NA	EPA 150.1	MM	08/08/89
Phenols (4-AAP)	2.1	0.05	EPA 420.1	TS/MM	08/18/89
Potassium (K) *	680	1	EPA 258.1	KG	08/21/89
Specific Conductance (field)	7140	NA	EPA 120.1	MA/SC	08/08/89
Specific Conductance (lab A)	9250	NA	EPA 120.1	MM	08/08/89
Sulfate (SO_4) *	3900	1000	EPA 375.4	SW	08/25/89
Temperature, °C (field)	16.5	NA	EPA 170.1	MA/SC	08/08/89
Total Dissolved Solids *	7500	4	EPA 160.1	CL/CM	08/16/89

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.
(5) *-Specific Conductance expressed as micromhos/cm.

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #13

	Results	Detection Limits	Method	Analyst	Date Test Completed
Total Organic Carbon (A) *	1200	10	EPA 415.1	MM	08/11/89
Total Organic Halogen (A)	65	10	EPA 9020	CM	08/19/89
Toxaphene	ND	0.06	EPA 8080	GD/RJ	08/18/89
Zinc (Zn)	0.06	0.01	EPA 289.1	KG	08/21/89
2,4-D	ND	0.03	EPA 8150	GD/RJ	08/16/89
2,4,5-TP (Silvex)	ND	0.005	EPA 8150	GD/RJ	08/16/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) *-Analyses performed on filtered (0.45 micron) sample.

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #13A

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd) *	ND	0.01	EPA 213.1	KG	08/21/89
Chloride (Cl) *	1900	25	EPA 325.3	RAH	08/10/89
Chromium (Cr), Hexavalent *	ND	0.1	SM 312B	TS	08/10/89
Chromium (Cr), Total *	ND	0.05	EPA 218.1	KG	08/21/89
Copper (Cu)	0.02	0.01	EPA 220.1	KG	08/21/89
Endrin	ND	0.001	EPA 8080	GD/RJ	08/18/89
Ground Water Elevation (field)	3.6	NA	NA	MA/SC	08/08/89
Iron (Fe) *	1400	10	EPA 236.1	KG	08/21/89
Lindane	ND	0.001	EPA 8080	GD/RJ	08/18/89
Mercury (Hg) *	ND	0.005	EPA 245.1	FK	08/15/89
Methoxychlor	ND	0.003	EPA 8080	GD/RJ	08/18/89
Nickel (Ni)	0.20	0.02	EPA 249.1	KG	08/21/89
pH (field)	5.8	NA	EPA 150.1	MA/SC	08/08/89
pH (lab A)	5.7	NA	EPA 150.1	MM	08/08/89
Phenols (4-AAP)	0.08	0.005	EPA 420.1	MM/TS	08/18/89
Potassium (K) *	45.8	0.1	EPA 258.1	KG	08/21/89
Specific Conductance (field)	4930	NA	EPA 120.1	MA/SC	08/08/89
Specific Conductance (lab A)	6830	NA	EPA 120.1	MM	08/08/89
Sulfate (SO_4) *	3200	500	EPA 375.4	SW	08/25/89
Temperature, °C (field)	15.8	NA	EPA 170.1	MA/SC	08/08/89
Total Dissolved Solids *	5100	2	EPA 160.1	CL/CM	08/16/89

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.
(5) *-Specific Conductance expressed as micromhos/cm.

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #13A

	Results	Detection Limits	Method	Analyst	Date Test Completed
Total Organic Carbon (A) *	250	10	EPA 415.1	MM	08/11/89
Total Organic Halogen (A)	3.8	0.2	EPA 9020	CM	08/19/89
Toxaphene	ND	0.03	EPA 8080	GD/RJ	08/18/89
Zinc (Zn)	0.09	0.01	EPA 289.1	KG	08/21/89
2,4-D	ND	0.003	EPA 8150	GD/RJ	08/16/89
2,4,5-TP (Silvex)	ND	0.0005	EPA 8150	GD/RJ	08/16/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) *-Analyses performed on filtered (0.45 micron) sample.

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #14

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd) *	ND	0.01	EPA 213.1	KG	08/21/89
Chloride (Cl) *	420	2	EPA 325.3	RAH	08/10/89
Chromium (Cr), Hexavalent *	ND	0.1	SM 312B	TS	08/10/89
Chromium (Cr), Total *	ND	0.05	EPA 218.1	KG	08/21/89
Copper (Cu)	0.02	0.01	EPA 220.1	KG	08/21/89
Endrin	ND	0.002	EPA 8080	GD/RJ	08/18/89
Ground Water Elevation (field)	2.1	NA	NA	MA/SC	08/08/89
Iron (Fe) *	78.0	0.1	EPA 236.1	KG	08/21/89
Lindane	ND	0.001	EPA 8080	GD/RJ	08/18/89
Mercury (Hg) *	ND	0.005	EPA 245.1	FK	08/15/89
Methoxychlor	ND	0.008	EPA 8080	GD/RJ	08/18/89
Nickel (Ni)	ND	0.02	EPA 249.1	KG	08/21/89
pH (field)	6.5	NA	EPA 150.1	MA/SC	08/08/89
pH (lab A)	6.5	NA	EPA 150.1	MM	08/08/89
Phenols (4-AAP)	0.05	0.005	EPA 420.1	MM/TS	08/18/89
Potassium (K) *	63.3	0.1	EPA 258.1	KG	08/21/89
Specific Conductance (field)	2330	NA	EPA 120.1	MA/SC	08/08/89
Specific Conductance (lab A)	1920	NA	EPA 120.1	MM	08/08/89
Sulfate (SO_4) *	1300	200	EPA 375.4	SW	08/25/89
Temperature, °C (field)	17.3	NA	EPA 170.1	MA/SC	08/08/89
Total Dissolved Solids *	1500	2	EPA 160.1	CL/CM	08/16/89

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.
(5) *-Specific Conductance expressed as micromhos/cm.

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #14

	Results	Detection Limits	Method	Analyst	Date Test Completed
Total Organic Carbon (A) *	100	1	EPA 415.1	MM	08/11/89
Total Organic Halogen (A)	4.4	0.2	EPA 9020	CM	08/19/89
Toxaphene	ND	0.03	EPA 8080	GD/RJ	08/18/89
Zinc (Zn)	0.05	0.01	EPA 289.1	KG	08/21/89
2,4-D	ND	0.003	EPA 8150	GD/RJ	08/16/89
2,4,5-TP (Silvex)	ND	0.005	EPA 8150	GD/RJ	08/16/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) *-Analyses performed on filtered (0.45 micron) sample.

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #15

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd) *	ND	0.01	EPA 213.1	KG	08/21/89
Chloride (Cl) *	6300	50	EPA 325.3	RAH	08/10/89
Chromium (Cr), Hexavalent *	ND	0.1	SM 312B	TS	08/10/89
Chromium (Cr), Total *	ND	0.05	EPA 218.1	KG	08/21/89
Copper (Cu)	0.02	0.01	EPA 220.1	KG	08/21/89
Endrin	ND	0.02	EPA 8080	GD/RJ	08/18/89
Ground Water Elevation (field)	10.9	NA	NA	MA/SC	08/08/89
Iron (Fe) *	0.18	0.01	EPA 236.1	KG	08/21/89
Lindane	ND	0.002	EPA 8080	GD/RJ	08/18/89
Mercury (Hg) *	ND	0.005	EPA 245.1	FK	08/15/89
Methoxychlor	ND	0.01	EPA 8080	GD/RJ	08/18/89
Nickel (Ni)	0.04	0.02	EPA 249.1	KG	08/21/89
pH (field)	6.4	NA	EPA 150.1	MA/SC	08/08/89
pH (lab A)	6.5	NA	EPA 150.1	MM	08/08/89
Phenols (4-AAP)	21	0.3	EPA 420.1	TS	08/18/89
Potassium (K) *	2300	10	EPA 258.1	KG	08/21/89
Specific Conductance (field)	12020	NA	EPA 120.1	MA/SC	08/08/89
Specific Conductance (lab A)	17890	NA	EPA 120.1	MM	08/08/89
Sulfate (SO_4) *	4500	1000	EPA 375.4	SW	08/25/89
Temperature, °C (field)	17.3	NA	EPA 170.1	MA/SC	08/08/89
Total Dissolved Solids *	11000	4	EPA 160.1	CL/CM	08/16/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.
(5) *-Specific Conductance expressed as micromhos/cm.

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #15

	Results	Detection Limits	Method	Analyst	Date Test Completed
Total Organic Carbon (A) *	1200	10	EPA 415.1	MM	08/11/89
Total Organic Halogen (A)	26	2	EPA 9020	CM	08/19/89
Toxaphene	ND	0.07	EPA 8080	GD/RJ	08/18/89
Zinc (Zn)	0.02	0.01	EPA 289.1	KG	08/21/89
2,4-D	ND	0.03	EPA 8150	GD/RJ	08/16/89
2,4,5-TP (Silvex)	ND	0.005	EPA 8150	GD/RJ	08/16/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) *-Analyses performed on filtered (0.45 micron) sample.

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #16

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd) *	ND	0.01	EPA 213.1	KG	08/21/89
Chloride (Cl) *	4200	25	EPA 325.3	RAH	08/10/89
Chromium (Cr), Total *	0.67	0.05	EPA 218.1	KG	08/21/89
Endrin	ND	0.001	EPA 8080	GD/RJ	08/22/89
Ground Water Elevation (field)	3.6	NA	NA	TS/SC	08/09/89
Iron (Fe) *	0.72	0.01	EPA 236.1	KG	08/21/89
Lindane	ND	0.001	EPA 8080	GD/RJ	08/22/89
Mercury (Hg) *	ND	0.005	EPA 245.1	FK	08/15/89
Methoxychlor	ND	0.005	EPA 8080	GD/RJ	08/22/89
pH (field)	7.0	NA	EPA 150.1	TS/SC	08/09/89
pH (lab A)	7.1	NA	EPA 150.1	CM	08/09/89
pH (lab B)	7.5	NA	EPA 150.1	CM	08/09/89
pH (lab C)	7.0	NA	EPA 150.1	CM	08/09/89
pH (lab D)	7.0	NA	EPA 150.1	CM	08/09/89
Phenols (4-AAP)	0.42	0.005	EPA 420.1	TS	08/25/89
Potassium (K) *	2700	10	EPA 258.1	KG	08/21/89
Specific Conductance (field)	18400	NA	EPA 120.1	TS/SC	08/09/89
Specific Conductance (lab A)	20200	NA	EPA 120.1	MM	08/09/89
Specific Conductance (lab B)	20400	NA	EPA 120.1	MM	08/09/89
Specific Conductance (lab C)	20500	NA	EPA 120.1	MM	08/09/89
Specific Conductance (lab D)	20500	NA	EPA 120.1	MM	08/09/89
Sulfate (SO_4) *	4300	1000	EPA 375.4	SW	08/25/89
Temperature, °C (field)	22.1	NA	EPA 170.1	TS/SC	08/09/89
Total Dissolved Solids *	16000	4	EPA 160.1	CL/CM	08/16/89

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.
(5) *-Specific Conductance expressed as micromhos/cm.

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REPORT OF ANALYSIS

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #16

	Results	Detection Limits	Method	Analyst	Date Test Completed
Total Organic Carbon (A) *	2300	100	EPA 415.1	TS	08/14/89
Total Organic Carbon (B) *	2300	100	EPA 415.1	TS	08/14/89
Total Organic Carbon (C) *	2300	100	EPA 415.1	TS	08/14/89
Total Organic Carbon (D) *	2400	100	EPA 415.1	TS	08/14/89
Total Organic Halogen (A)	179	20	EPA 9020	CM	08/22/89
Total Organic Halogen (B)	190	20	EPA 9020	CM	08/22/89
Total Organic Halogen (C)	183	20	EPA 9020	CM	08/22/89
Total Organic Halogen (D)	176	20	EPA 9020	CM	08/22/89
Toxaphene	ND	0.03	EPA 8080	GD/RJ	08/22/89
2,4-D	ND	0.02	EPA 8150	GD/RJ	08/17/89
2,4,5-TP (Silvex)	ND	0.01	EPA 8150	GD/RJ	08/17/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.

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REPORT OF ANALYSIS

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #17

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd) *	ND	0.01	EPA 213.1	KG	08/21/89
Chloride (Cl) *	710	5	EPA 325.3	RAH	08/10/89
Chromium (Cr), Total *	ND	0.05	EPA 218.1	KG	08/21/89
Endrin	ND	0.001	EPA 8080	GD/RJ	08/22/89
Ground Water Elevation (field)	2.6	NA	NA	TS/SC	08/09/89
Iron (Fe) *	209	1	EPA 236.1	KG	08/21/89
Lindane	ND	0.001	EPA 8080	GD/RJ	08/22/89
Mercury (Hg) *	ND	0.005	EPA 245.1	FK	08/15/89
Methoxychlor	ND	0.007	EPA 8080	GD/RJ	08/22/89
pH (field)	4.6	NA	EPA 150.1	TS/SC	08/09/89
pH (lab A)	4.3	NA	EPA 150.1	CM	08/09/89
pH (lab B)	4.5	NA	EPA 150.1	CM	08/09/89
pH (lab C)	4.3	NA	EPA 150.1	CM	08/09/89
pH (lab D)	4.3	NA	EPA 150.1	CM	08/09/89
Phenols (4-AAP)	0.37	0.005	EPA 420.1	TS	08/25/89
Potassium (K) *	12.9	0.1	EPA 258.1	KG	08/21/89
Specific Conductance (field)	2480	NA	EPA 120.1	TS/SC	08/09/89
Specific Conductance (lab A)	3040	NA	EPA 120.1	MM	08/09/89
Specific Conductance (lab B)	2930	NA	EPA 120.1	MM	08/09/89
Specific Conductance (lab C)	3030	NA	EPA 120.1	MM	08/09/89
Specific Conductance (lab D)	3020	NA	EPA 120.1	MM	08/09/89
Sulfate (SO_4) *	400	10	EPA 375.4	SW	08/25/89
Temperature, °C (field)	18.2	NA	EPA 170.1	TS/SC	08/09/89
Total Dissolved Solids *	2400	1	EPA 160.1	CL	08/16/89

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.
(5) *-Specific Conductance expressed as micromhos/cm.

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REPORT OF ANALYSIS

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #17

	Results	Detection Limits	Method	Analyst	Date Test Completed
Total Organic Carbon (A) *	64	1	EPA 415.1	TS	08/14/89
Total Organic Carbon (B) *	60	1	EPA 415.1	TS	08/14/89
Total Organic Carbon (C) *	76	1	EPA 415.1	TS	08/14/89
Total Organic Carbon (D) *	87	1	EPA 415.1	TS	08/14/89
Total Organic Halogen (A)	35	5	EPA 9020	CM	08/22/89
Total Organic Halogen (B)	42	3	EPA 9020	CM	08/22/89
Total Organic Halogen (C)	41	3	EPA 9020	CM	08/22/89
Total Organic Halogen (D)	40	5	EPA 9020	CM	08/22/89
Toxaphene	ND	0.04	EPA 8080	GD/RJ	08/22/89
2,4-D	ND	0.001	EPA 8150	GD/RJ	08/17/89
2,4,5-TP (Silvex)	ND	0.001	EPA 8150	GD/RJ	08/17/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.

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REPORT OF ANALYSIS

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #22

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd) *	ND	0.01	EPA 213.1	KG	08/21/89
Chloride (Cl) *	260	2	EPA 325.3	RAH	08/10/89
Chromium (Cr), Total *	ND	0.05	EPA 218.1	KG	08/21/89
Endrin	ND	0.002	EPA 8080	GD	08/21/89
Ground Water Elevation (field)	15.6	NA	NA	MA/SC	08/08/89
Iron (Fe) *	19.3	0.1	EPA 236.1	KG	08/21/89
Lindane	ND	0.003	EPA 8080	GD	08/21/89
Mercury (Hg) *	ND	0.005	EPA 245.1	FK	08/15/89
Methoxychlor	ND	0.03	EPA 8080	GD	08/18/89
pH (field)	5.7	NA	EPA 150.1	MA/SC	08/08/89
pH (lab A)	5.8	NA	EPA 150.1	MM	08/08/89
pH (lab B)	5.9	NA	EPA 150.1	MM	08/08/89
pH (lab C)	5.8	NA	EPA 150.1	MM	08/08/89
pH (lab D)	5.8	NA	EPA 150.1	MM	08/08/89
Phenols (4-AAP)	0.18	0.005	EPA 420.1	TS	08/25/89
Potassium (K) *	0.8	0.1	EPA 258.1	KG	08/21/89
Specific Conductance (field)	800	NA	EPA 120.1	MA/SC	08/08/89
Specific Conductance (lab A)	885	NA	EPA 120.1	MM	08/08/89
Specific Conductance (lab B)	866	NA	EPA 120.1	MM	08/08/89
Specific Conductance (lab C)	871	NA	EPA 120.1	MM	08/08/89
Specific Conductance (lab D)	947	NA	EPA 120.1	MM	08/08/89
Sulfate (SO_4) *	650	100	EPA 375.4	SW	08/25/89
Temperature, °C (field)	18.6	NA	EPA 170.1	MA/SC	08/08/89
Total Dissolved Solids *	589	1	EPA 160.1	CL	08/16/89

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.
(5) *-Specific Conductance expressed as micromhos/cm.

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REPORT OF ANALYSIS

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #22

	Results	Detection Limits	Method	Analyst	Date Test Completed
Total Organic Carbon (A) *	49	1	EPA 415.1	TS	08/14/89
Total Organic Carbon (B) *	54	1	EPA 415.1	TS	08/14/89
Total Organic Carbon (C) *	48	1	EPA 415.1	TS	08/14/89
Total Organic Carbon (D) *	49	1	EPA 415.1	TS	08/14/89
Total Organic Halogen (A)	36	5	EPA 9020	CM	08/19/89
Total Organic Halogen (B)	35	5	EPA 9020	CM	08/19/89
Total Organic Halogen (C)	42	5	EPA 9020	CM	08/19/89
Total Organic Halogen (D)	38	5	EPA 9020	CM	08/19/89
Toxaphene	ND	0.03	EPA 8080	GD/RJ	08/18/89
2,4-D	ND	0.003	EPA 8150	GD/RJ	08/16/89
2,4,5-TP (Silvex)	ND	0.0006	EPA 8150	GD/RJ	08/16/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.

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REPORT OF ANALYSIS

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #23

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd) *	ND	0.01	EPA 213.1	KG	08/21/89
Chloride (Cl) *	230	5	EPA 325.3	RAH	08/10/89
Chromium (Cr), Total *	ND	0.05	EPA 218.1	KG	08/21/89
Endrin	ND	0.003	EPA 8080	GD/RJ	08/18/89
Ground Water Elevation (field)	15.5	NA	NA	MA/SC	08/08/89
Iron (Fe) *	61.5	0.1	EPA 236.1	KG	08/21/89
Lindane	ND	0.003	EPA 8080	GD	08/21/89
Mercury (Hg) *	ND	0.005	EPA 245.1	FK	08/15/89
Methoxychlor	ND	0.03	EPA 8080	GD/RJ	08/18/89
pH (field)	5.9	NA	EPA 150.1	MA/SC	08/08/89
pH (lab A)	6.0	NA	EPA 150.1	MM	08/08/89
pH (lab B)	6.0	NA	EPA 150.1	MM	08/08/89
pH (lab C)	6.0	NA	EPA 150.1	MM	08/08/89
pH (lab D)	6.0	NA	EPA 150.1	MM	08/08/89
Phenols (4-AAP)	0.17	0.005	EPA 420.1	TS	08/25/89
Potassium (K) *	0.8	0.1	EPA 258.1	KG	08/21/89
Specific Conductance (field)	638	NA	EPA 120.1	MA/SC	08/08/89
Specific Conductance (lab A)	743	NA	EPA 120.1	MM	08/08/89
Specific Conductance (lab B)	738	NA	EPA 120.1	MM	08/08/89
Specific Conductance (lab C)	738	NA	EPA 120.1	MM	08/08/89
Specific Conductance (lab D)	745	NA	EPA 120.1	MM	08/08/89
Sulfate (SO_4) *	1500	200	EPA 375.4	SW	08/25/89
Temperature, °C (field)	19.3	NA	EPA 170.1	MA/SC	08/08/89
Total Dissolved Solids *	487	1	EPA 160.1	CL	08/16/89

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.
(5) *-Specific Conductance expressed as micromhos/cm.

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REPORT OF ANALYSIS

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #23

	Results	Detection Limits	Method	Analyst	Date Test Completed
Total Organic Carbon (A) *	32	1	EPA 415.1	RAH	08/16/89
Total Organic Carbon (B) *	31	1	EPA 415.1	RAH	08/16/89
Total Organic Carbon (C) *	29	1	EPA 415.1	RAH	08/16/89
Total Organic Carbon (D) *	30	1	EPA 415.1	RAH	08/16/89
Total Organic Halogen (A)	73	2	EPA 9020	CM	08/19/89
Total Organic Halogen (B)	57	10	EPA 9020	CM	08/19/89
Total Organic Halogen (C)	73	5	EPA 9020	CM	08/19/89
Total Organic Halogen (D)	66	5	EPA 9020	CM	08/19/89
Toxaphene	ND	0.1	EPA 8080	GD/RJ	08/18/89
2,4-D	ND	0.003	EPA 8150	GD/RJ	08/16/89
2,4,5-TP (Silvex)	ND	0.0005	EPA 8150	GD/RJ	08/16/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.

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REPORT OF ANALYSIS

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #24

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd) *	ND	0.01	EPA 213.1	KG	08/21/89
Chloride (Cl) *	120	2	EPA 325.3	RAH	08/10/89
Chromium (Cr), Total *	ND	0.05	EPA 218.1	KG	08/21/89
Endrin	ND	0.002	EPA 8080	GD/RJ	08/18/89
Ground Water Elevation (field)	15.4	NA	NA	MA/SC	08/08/89
Iron (Fe) *	52.9	0.1	EPA 236.1	KG	08/21/89
Lindane	ND	0.002	EPA 8080	GD/RJ	08/18/89
Mercury (Hg) *	ND	0.005	EPA 245.1	FK	08/15/89
Methoxychlor	ND	0.02	EPA 8080	GD/RJ	08/18/89
pH (field)	6.0	NA	EPA 150.1	MA/SC	08/08/89
pH (lab A)	6.1	NA	EPA 150.1	MM	08/08/89
pH (lab B)	6.2	NA	EPA 150.1	MM	08/08/89
pH (lab C)	6.1	NA	EPA 150.1	MM	08/08/89
pH (lab D)	6.2	NA	EPA 150.1	MM	08/08/89
Phenols (4-AAP)	0.02	0.005	EPA 420.1	TS	08/25/89
Potassium (K) *	0.6	0.1	EPA 258.1	KG	08/21/89
Specific Conductance (field)	479	NA	EPA 120.1	MA/SC	08/08/89
Specific Conductance (lab A)	474	NA	EPA 120.1	MM	08/08/89
Specific Conductance (lab B)	481	NA	EPA 120.1	MM	08/08/89
Specific Conductance (lab C)	482	NA	EPA 120.1	MM	08/08/89
Specific Conductance (lab D)	477	NA	EPA 120.1	MM	08/08/89
Sulfate (SO_4) *	800	100	EPA 375.4	SW	08/25/89
Temperature, °C (field)	17.3	NA	EPA 170.1	MA/SC	08/08/89
Total Dissolved Solids *	347	1	EPA 160.1	CL	08/16/89

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.
(5) *-Specific Conductance expressed as micromhos/cm.

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REPORT OF ANALYSIS

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #24

	Results	Detection Limits	Method	Analyst	Date Test Completed
Total Organic Carbon (A) *	15	1	EPA 415.1	TS	08/14/89
Total Organic Carbon (B) *	15	1	EPA 415.1	TS	08/14/89
Total Organic Carbon (C) *	15	1	EPA 415.1	TS	08/14/89
Total Organic Carbon (D) *	15	1	EPA 415.1	TS	08/14/89
Total Organic Halogen (A)	0.46	0.02	EPA 9020	CM	08/19/89
Total Organic Halogen (B)	0.18	0.04	EPA 9020	CM	08/19/89
Total Organic Halogen (C)	0.24	0.02	EPA 9020	CM	08/19/89
Total Organic Halogen (D)	0.17	0.02	EPA 9020	CM	08/19/89
Toxaphene	ND	0.06	EPA 8080	GD/RJ	08/18/89
2,4-D	ND	0.003	EPA 8150	GD/RJ	08/16/89
2,4,5-TP (Silvex)	ND	0.0005	EPA 8150	GD/RJ	08/16/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.

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REPORT OF ANALYSIS

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #25

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd) *	ND	0.01	EPA 213.1	KG	08/21/89
Chloride (Cl) *	120	2	EPA 325.3	RAH	08/10/89
Chromium (Cr), Total *	ND	0.05	EPA 218.1	KG	08/21/89
Endrin	ND	0.001	EPA 8080	GD/RJ	08/18/89
Ground Water Elevation (field)	26.9	NA	NA	MA/SC	08/08/89
Iron (Fe) *	0.39	0.01	EPA 236.1	KG	08/21/89
Lindane	ND	0.001	EPA 8080	GD/RJ	08/18/89
Mercury (Hg) *	ND	0.005	EPA 245.1	FK	08/15/89
Methoxychlor	ND	0.01	EPA 8080	GD/RJ	08/18/89
pH (field)	6.7	NA	EPA 150.1	MA/SC	08/08/89
pH (lab A)	7.9	NA	EPA 150.1	MM	08/08/89
pH (lab B)	6.8	NA	EPA 150.1	MM	08/08/89
pH (lab C)	7.2	NA	EPA 150.1	MM	08/08/89
pH (lab D)	7.1	NA	EPA 150.1	MM	08/08/89
Phenols (4-AAP)	0.20	0.005	EPA 420.1	TS	08/25/89
Potassium (K) *	19.4	0.1	EPA 258.1	KG	08/21/89
Specific Conductance (field)	684	NA	EPA 120.1	MA/SC	08/08/89
Specific Conductance (lab A)	821	NA	EPA 120.1	MM	08/08/89
Specific Conductance (lab B)	810	NA	EPA 120.1	MM	08/08/89
Specific Conductance (lab C)	808	NA	EPA 120.1	MM	08/08/89
Specific Conductance (lab D)	806	NA	EPA 120.1	MM	08/08/89
Sulfate (SO_4) *	360	50	EPA 375.4	SW	08/25/89
Temperature, °C (field)	18.4	NA	EPA 170.1	MA/SC	08/08/89
Total Dissolved Solids *	761	1	EPA 160.1	CL	08/16/89

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.
(5) *-Specific Conductance expressed as micromhos/cm.

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REPORT OF ANALYSIS

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Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #25

	Results	Detection Limits	Method	Analyst	Date Test Completed
Total Organic Carbon (A) *	65	1	EPA 415.1	MM	08/15/89
Total Organic Carbon (B) *	61	1	EPA 415.1	MM	08/15/89
Total Organic Carbon (C) *	60	1	EPA 415.1	MM	08/15/89
Total Organic Carbon (D) *	62	1	EPA 415.1	MM	08/15/89
Total Organic Halogen (A)	160	2.0	EPA 9020	CM	08/19/89
Total Organic Halogen (B)	1.08	20	EPA 9020	CM	08/19/89
Total Organic Halogen (C)	134	10	EPA 9020	CM	08/19/89
Total Organic Halogen (D)	129	10	EPA 9020	CM	08/19/89
Toxaphene	ND	0.03	EPA 8080	GD/RJ	08/18/89
2,4-D	ND	0.007	EPA 8150	GD/RJ	08/16/89
2,4,5-TP (Silvex)	ND	0.004	EPA 8150	GD/RJ	08/16/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Gascoyne Laboratories, Inc.

ORIGINAL (Red)

Baltimore, MD 21224-6697

BALTIMORE, M.D.
(301) 285-8510

FAX #
(301) 285-0815

REPORT OF ANALYSIS

Report No. 89-08-198 Report Date: September 12, 1989

Report To: FMC Corporation Page: 27 of 28

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #27

	Results	Detection Limits	Method	Analyst	Date Test Completed
Cadmium (Cd) *	ND	0.01	EPA 213.1	KG	08/21/89
Chloride (Cl) *	1900	25	EPA 325.3	RAH	08/10/89
Chromium (Cr), Total *	ND	0.05	EPA 218.1	KG	08/21/89
Endrin	ND	0.002	EPA 8080	GD/RJ	08/22/89
Ground Water Elevation (field)	2.4	NA	NA	TS/SC	08/09/89
Iron (Fe) *	916	1	EPA 236.1	KG	08/21/89
Lindane	ND	0.001	EPA 8080	GD/RJ	08/22/89
Mercury (Hg) *	ND	0.005	EPA 245.1	FK	08/15/89
Methoxychlor	ND	0.005	EPA 8080	GD/RJ	08/22/89
pH (field)	5.3	NA	EPA 150.1	TS/SC	08/09/89
pH (lab A)	5.4	NA	EPA 150.1	CM	08/09/89
pH (lab B)	5.4	NA	EPA 150.1	CM	08/09/89
pH (lab C)	5.3	NA	EPA 150.1	CM	08/09/89
pH (lab D)	5.3	NA	EPA 150.1	CM	08/09/89
Phenols (4-AAP)	0.04	0.005	EPA 420.1	TS	08/25/89
Potassium (K) *	190	1	EPA 258.1	KG	08/21/89
Specific Conductance (field)	8200	NA	EPA 120.1	TS/SC	08/09/89
Specific Conductance (lab A)	8490	NA	EPA 120.1	MM	08/09/89
Specific Conductance (lab B)	8530	NA	EPA 120.1	MM	08/09/89
Specific Conductance (lab C)	8490	NA	EPA 120.1	MM	08/09/89
Specific Conductance (lab D)	8450	NA	EPA 120.1	MM	08/09/89
Sulfate (SO_4) *	4000	500	EPA 375.4	SW	08/25/89
Temperature, °C (field)	18.8	NA	EPA 170.1	TS/SC	08/09/89
Total Dissolved Solids *	6900	2	EPA 160.1	CL	08/16/89

Notes:
(1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.
(5) *-Specific Conductance expressed as micromhos/cm.

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Please see reverse side for explanations and other information.

Gascoyne Laboratories, Inc.

ORIGINAL (Red)

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REPORT OF ANALYSIS

Report No. 89-08-198 Report Date: September 12, 1989

Report To: FMC Corporation Page: 28 of 28

Sample I.D. Monitoring Well samples taken by Gascoyne Laboratories, Inc., on 8/8/89 and 8/9/89 at the Patapsco Avenue location.

Well Number: #27

	Results	Detection Limits	Method	Analyst	Date Test Completed
Total Organic Carbon (A) *	430	10	EPA 415.1	MM	08/16/89
Total Organic Carbon (B) *	430	10	EPA 415.1	MM	08/16/89
Total Organic Carbon (C) *	420	10	EPA 415.1	MM	08/16/89
Total Organic Carbon (D) *	420	10	EPA 415.1	MM	08/16/89
Total Organic Halogen (A)	6.7	1	EPA 9020	CM	08/22/89
Total Organic Halogen (B)	7.2	1	EPA 9020	CM	08/22/89
Total Organic Halogen (C)	6.7	1	EPA 9020	CM	08/22/89
Total Organic Halogen (D)	7.8	1	EPA 9020	CM	08/22/89
Toxaphene	ND	0.03	EPA 8080	GD/RJ	08/22/89
2,4-D	ND	0.001	EPA 8150	GD/RJ	08/17/89
2,4,5-TP (Silvex)	ND	0.001	EPA 8150	GD/RJ	08/17/89

Notes: (1) Results are expressed in mg/liter.
(2) ND-Not Detected.
(3) NA-Not Applicable.
(4) *-Analyses performed on filtered (0.45 micron) sample.

Irving M. Kipnis

Laboratory Director
Irving M. Kipnis, Ph.D.

Please see reverse side for explanations and other information.

Scotch® 764 "Post-it" Routing-Request Pad

ROUTING - REQUEST

ORIGINAL (Red)

Please
- ☐ READ
- ☐ HANDLE
- ☐ APPROVE

and
- ☐ FORWARD
- ☐ RETURN
- ☐ KEEP OR DISCARD
- ☐ REVIEW WITH ME

To: Monica Miller Saturos

for our telephone call - these are the variety of forms which we use to monitor incineration operations.

Date: 2/1/89 From: Parker

BLE VII
RA OPERATING LOG

OPERATOR SIGNATURE: _____
DATE: _____

TOTALIZED FLOWS	0700 BEGINNING OF DAY	0700 END OF DAY	DAILY TOTAL
HERBICIDE BOTTOMS (LB)			
MAC HEELS (LB) PLANT 4 ORGANICS			
WASTE METHANOL (LB)			

INCINERATOR VISUAL INSPECTION

7-3 _____
3-11 _____
11-7 _____

ORIGINAL
(Red)

TABLE IX
CO CALIBRATION LOG

DATE	GAIN SETTING UNIT 1	GAIN SETTING UNIT 2	OPERATOR

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TABLE II
INCINERATOR RCRA SAMPLING CHECKLIST

MONTH/YEAR: _____

SAMPLE	SAMPLE#	ANALYSIS	SIZE	OPERATOR	DATE
MAC HEELS/ PLANT 4 ORGANICS	S-6001	% Chlorine Viscosity % Ash	QUART		
HERBICIDE BOTTOMS	S-6002	% Chlorine % Ash	QUART		
WASTE METHANOL	S-6003	% Chlorine Viscosity % Ash	QUART		
WASTE METHANOL/ BASIN OILS	S-6004	Viscosity % Ash	QUART		
70H TAR	S-6005	% Ash	4 OZ		
SUPERTAR	S-6006	% Ash	4 OZ		

LIST NON-ROUTINE WASTES SAMPLED:

A.	%Chlorine Viscosity % Ash
B.	%Chlorine Viscosity % Ash

ORIGINAL (Red)

TABLE X
BASIN OILS TREATMENT LOG

DATE TIME OPERATOR

1. Add Basin Oils to T-2204A or T-2208 (approx 40%).
   Circle one: Second Basin Oils
   Third Basin Oils

2. If Basin Oils have already been treated, go to step 3.
   a. Add approx. 40 % water to tank

   b. Add dymsol to tank.

   c. Agitate tank.

   d. Sample oils for % Water.

   e. Cut water from T-2204A.

3. Blend Basin Oils with:
   Circle one: Waste Methanol
   MAC Heels/Plant 4 Organics

   Transfer no more than 9 % Basin Oil into feed tank.
   Circle one: T-2204B (Waste Methanol)
   T-2204A(MAC Heels/Plant 4 Organics)

   T-2204A Starting Level _____
   T-2204A Ending Level _____
   T-2204B Starting Level _____
   T-2204B Ending Level _____
   T-2208 Starting Level _____
   T-2208 Ending Level _____

4. Fill feed tank to approximately 90 % with Waste Methanol or MAC Heels/Plant 4 Organics.

5. Agitate feed tank.

6. Allow one hour for solids settling.

7. Feed Basin Oils blend to the incinerator

ORIGINAL (Red)

TABLE V

INCINERATOR RCRA INCIDENT REPORT

INCINERATOR OPERATOR: _____ TIME _____

SHIFT SUPERVISOR: _____ DATE _____

RCRA PARAMETER VIOLATED: _____

INCIDENT DESCRIPTION: _____

CORRECTIVE ACTIONS TAKEN: _____

TIME AT START OF VIOLATION: _____

TIME AT END OF VIOLATION: _____

MAGNITUDE OF EXCEEDANCE: _____

CAUSE OF EXCEEDANCE: _____

CORRECTIVE MEASURES TAKEN TO PREVENT REOCCURENCE: _____

DID AUTOMATIC WASTE FEED SHUTDOWN OCCUR? _____

ANY OTHER COMMENTS: _____

White copy: Environmental Department
Pink copy: Unit Supervisor
Yellow copy: Technical Department (Process Engineer)

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INCINERATOR AREA DAILY INSPECTION

NAME: _____ DATE: _____ TIME: _____

LEAKS:

	NO	YES	LOCATION OF LEAK	W/R ISSUED?	EST. COMPLETION?
PIPING	___	___	_____	_____	_____
VALVES	___	___	_____	_____	_____
PUMPS	___	___	_____	_____	_____
OTHER	___	___	_____	_____	_____

SPILLS:

HAS ANY MATERIAL BEEN SPILLED SINCE THE LAST INSPECTION? NO__YES__
IF YES, WHAT WAS THE MATERIAL?_____
HOW MUCH WAS SPILLED?_____
HAS IT BEEN OR IS IT BEING CLEANED UP? YES____ NO____
IF NO, PLEASE EXPLAIN:_____

EQUIPMENT:

WHAT ARE THE CONDITION OF DIKES, DIKE VALVES, AND TANKS? GOOD_____
NEED REPAIR_____
IF REPAIRS ARE NEEDED, HAVE W/R'S BEEN WRITTEN? YES_____ NO_____
ESTIMATED COMPLETION DATE_____
ARE DIKE VALVES CLOSED? YES_____ NO_____
IF NOT, WHY NOT?_____
ARE THERE ANY EQUIPMENT MALFUNCTIONS? YES_____ NO_____
IF YES, PLEASE EXPLAIN:_____

SAFETY AND EMERGENCY EQUIPMENT:

ARE ALL SAFETY SHOWERS/EYEWASHES IN WORKING ORDER? YES____ NO____
IF NOT, HAVE REPAIRS BEEN REQUESTED? YES____ NO____
ESTIMATED COMPLETION DATE OF REPAIRS:_____

ARE ALL FIRE EXTINGUISHERS IN THEIR PROPER PLACE? YES____NO____
ARE ALL AIR PACKS AND GAS MASKS IN THEIR PROPER PLACE? YES___NO___
IF NO, PLEASE EXPLAIN:_____

COMMENTS:

INCINERATOR AREA DAILY INSPECTION

EQUIPMENT	LEVEL %	CONDITION G	CONDITION NR	ASSOC. EQUIP G	ASSOC. EQUIP NR	W/R IN? Y	W/R IN? N	COMMENTS
T2201								
T2203A/B								
T2204A/B								
T2208								
T4210								
P2212A/B	-							
P2213A/B	-							
P2206A/B	-							
P2203A/B	-							
P2205	-							
208	-							
C2201	-							
B2201	-							

G = GOOD
NR = NEEDS REPAIR

SPILLS:
HAS ANY MATERIAL BEEN SPILLED SINCE THE LAST INPECTION? NO___ YES___
WHAT WAS THE MATERIAL?_____
HOW MUCH WAS SPILLED?_____
HAS IT BEEN OR IS IT BEING CLEANED UP? YES___ NO___
IF NOT PLEASE EXPLAIN:_____

COMMENTS:
_____
_____
_____

OPERATOR'S SIGNATURE:_____

SUPERVISOR'S SIGNATURE:_____

TANKAGE

	Tar Tank Level	Tar Tank Temp.	T-2203 Level A/B	T-2204 Level A/B
		TR 22437	LI22325 / LI22319	LI22313 / LI22306
DC		130		
0800				
000				
1200				
400				
1600				
800				
2 00				
2				
2 00				
0200				
00				
0600				

TAR BUGGIES

SHIFT — 7-OH TAR (ORIGINAL) (Rd) 1 2 3 4 5 6 7 — Redistilled TAR 1 2 3

7/3												
3/11												
11/7												

TRAILERS

SPOTTED	REMOVED
Trailer No.	Trailer No.
Time	Time
Contents	What was in it?
% Filled	

RESIDUE BUGGIES

SPOTTED	REMOVED
Time	Time
Contents	What was in it?
% Filled	

TANK TRANSFERS

Time		From			To		
Start	Complete	Tank	Start Level	End Level	Tank	Start Level	End Level

Incinerator Feed From Trailer

Material	Time		Level	
	Start	Stop	Start	Stop

Date

Name

7/3

3/11

11/7

SSH 12/8

DATE: 7-3__ 3-11_ 11-__

OPERATOR SIGNATURE:

ORIGINAL Copy

TABLE VII
INCINERATOR RCRA OPERATING LOG

PARAMETER	TEMPERATURES			AIR FLOWS			WASTE FEED FLOWS					PRESSURES							
	CONSULT	SCRUBBER		PRIMARY	SECONDARY	TOR TAR	SUPER TAR	HERB SCUT	PIC/PA CAKE			ATOM STEM	ATOM AIR	PILOT AIR	PILOT PROP	OFF GAS	SC SEAL	SC SPRAY	
UNITS	DEG C	DEG C	DEG C	ACFM	ACFM	LB/HR	LB/HR	LB/HR	LB/HR	LB/HR		PSIG	PSIG	PSIG	PSIG	PSIG	GPM	GPM	
SENSOR #	TI-22432	TI-22434	TR-22457	FIC-6050	FIC-22462	FI-22491	FI-22482	FI-57422	FI-22490B	FI-22490A		PIC-22403	PI	PI	PI-22488	PIC-22457	FIC-22423	FIC-22A39	FI
HIGH LIMIT	NA	>1010	NA	<3000	<3000	<800	<1000	SEE GRAPH	SEE GRAPH	<2100		NA	NA	NA	NA	<0	>400	>240	
OTHER LIMIT	NA	>816	NA	<3000	<3000	NA	NA	SEE GRAPH	SEE GRAPH	NA		NA	NA	NA	NA	<0	>400	>240	
SOC	600-900	816-1200	48-70	0-3000	0-3000	0-3000	0-1000	0-3000	0-3000	0-2100		50-100	10-40	3-7	12-15	0-(-4)	360	230	
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